PART 4

PRICE [illegible]

THE

ARTIST'S REPOSITORY;

OR,

Encyclopedia of the Fine Arts:

EXHIBITING THE PRINCIPLES,

AND

EXPLAINING THE PRACTICE,

IN ALL THEIR VARIOUS BRANCHES.

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PRINCIPLES

OF

ARCHITECTURE.

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LECTURE I.

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LADIES and GENTLEMEN.

IF "the proper study of mankind is man," a very proper part of that study, is, to trace the efforts of human ingenuity, and the progress of human genius, and application. These qualities, are no where more apparent, than in man's inventions to supply the necessities which continually surround him, and to secure himself againſt thoſe evils to which his present condition exposes him. Time was, indeed, when he dreaded no evil, nor sought security, but safe in his lawful territories, there ruled and reigned; a paradise his palace! For the original dwelling of man is usually supposed to have been beneath the spreading shade, or under the verdant grove: or, if he sought other retirement, it was not in the gloomy cavern, or the melancholy cave; neither in antres vast, nor desarts wild; his bower was

Chosen by the Sovereign Planter, when he framed
All things to man's delightful use; the roof
Of thickest covert was in woven shade;
Laurel and Myrtle, and what higher grew
Of firm and fragrant leaf; on either side
Acanthus, and each odorous bushy shrub
Fenced up the verdant wall; each beauteous flower,
Iris all hues, Roses, and Jessamine,
Rear'd high their flourish'd heads between, and wrought
Mosaic; underfoot the Violet,
Crocus, and Hyacinth, with rich inlay
Broidered the ground, more coloured than with stone
Of costliest emblem :———

The traces of this "shady lodge" are not obliterated among his posterity; nor will be, while *hets* (a tree) bears any resemblance to *huts*, or its derivatives, in several languages spoken among the sons of men.

What might be the abode of ADAM after his expulsion from bliss, or, what kind of city CAIN might erect, we know not: possibly, the fortress of his security was but a composition of mud-walls, and reeds; rather exposing than concealing the trembling vagabond.

I confess, my reflections lead me to think, that the Antediluvians had little occasion for the study of ARCHITECTURE to any extent, as a science: for we must not conceive of certain natural things then, as we experience them to be now. It is likely, the earth was at that time, not only more fertile, but also more temperate; that the seasons were less rigorous, and the wants of human life less numerous. The Deluge, which changed considerably the face

face of the earth, most probably changed its temperature; and, perhaps, also, the Deluge was the first prolonged rain which had ever fallen; and not less astonishing to its beholders, than if it had been fire, instead of water. Is it asked, How then was the earth refreshed? By copious dews:—Thoſe countries at present watered by dews, are not the least fertile parts of the earth; and, certainly, dews might afford moisture sufficient to the earth when in full vigour, and when the heat of the sun was moderate. To this hypothesis agrees the extreme length of human life; and, in my opinion, the phenomenon of the rainbow; for if there was originally no rain, then there were no clouds; if no clouds, no rainbow, the offspring of clouds: this pacific token originating after the waters of the flood had covered the earth with oceans, with vapours arising from those oceans, and after the earth was subjected to a freſh system of actions exerted on it.

It is not my intention to notice the almost infinite varieties of ARCHITECTURE which at present obtain among different nations; it is of small consequence to us, on this occasion, to know, that the Samoiedes dwell underground, and pass their long night of winter without wishing for a window; or, that in certain parts of America the natives build their houses up in the trees, to avoid the sweeping floods: or, that many are the towns in China, which are constructed on the watery element, and cover the surface of rivers. That ornamental species of ARCHITECTURE which we have adopted, is more interesting to us, and is to be traced much

nearer to our own climate, amid the power and superstition of Egypt, the science and the application of Greece.

I am aware, that it has been supposed, divine instruction imparted architectural knowledge, and that among the favoured nation we are to look for its institution, or, at least, for its advancement, and its regularity: but, with all due respect to whatever seems to support this opinion, I beg leave to engage our thoughts to another, and a more probable, system.

Before science of any kind can make a considerable progress, civilized life must be advanced some degrees at least toward perfection; for, not till after a community possesses members sufficient for a distinct profession to be assigned to each, is much improvement in any profession to be expected. Alone, or nearly alone, a man must concenter every talent in himself, or at least in his family around him; muſt himself supply the necessities of life, one after another; and these necessities are too numerous, and too urgent, to permit him to acquire a dextrous management in the treatment of one, before his attention is required by its successor. If this reasoning be juſt, and if the necessities of life are supplied in haste, perhaps, too, imperfectly, surely, when articles of secondary moment are in question, they ſhall be dismissed with little regard, inſomuch, that after every supposable allowance as to the acquisition of conveniences, the elegancies of life muſt be relinquished: for what shall impell the already wearied person, to seek after any thing

thing not essential to his comfort, when the acquisition of indispensibles has been sufficiently fatiguing?

But beside the additional security, and strength, naturally arising from numbers, in a state of society, population is one source of wealth: and unquestionably, it is also a parent of emulation. A splendid dress, equipage, or habitation, are useless in a desert; but in a city, where they may be seen and admired, they are marks of distinction, they are supposed (how truly is not our question) to confer dignity, and, in their degree, to separate between the ranks of life.

When a profession is sufficiently honourable, or lucrative, to engage the attention of several practitioners, then we hope for improvements and advances in that profession: one practitioner will study and improve its theory, and its principles; another will improve its practice; and the desire of fame, or of fortune, will animate the endeavours of each to surpass the other, and to render himself conspicuous, by manifesting superior abilities.

I wish I was not obliged to add, as another occasion of improvement in the arts, that Superstition has greatly contributed to their advances. While men entertained ideas of paying to the deity superior worship, or of superior acceptance by devotions of superior expence, it is not wonderful they should endeavour to honour the objects of such worship by extravagant structures. These structures moreover, after a time, became the boast of city against city, and country against country: thereby involving national honour as well as local superstition.

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We have hinted, that the primitive dwelling of man was, probably, beneath a tree, where, as he had enjoyed converse with his maker, he had undoubtedly passed his happiest moments. There is, then, little wonder, that afterwards, trees, especially such as were of venerable aspect, and of spreading foliage, should be chosen by mankind as places of devotion.

It is somewhat unhappy, that, in our translation of the scriptures, the passages which relate to Abraham's sojournings in the *plains* of Moreh, were not rendered by the *oaks* of Moreh, for such is the import of the original word: and many of the transactions recorded in the history of that patriarch would appear more intelligible, had this been attended to; however this may be, we find groves were, in ancient times, considered as necessary parts of devotional structures, and happy were the temples around which the oaks flourished. But, in no part of the world was the oak in higher honour than in Britain, where, for ages, every solemnity was performed beneath it, and every important consultation, and assembly, was held under its branches; and afterwards, when stones were erected into temples, oaks continued to be regarded as sacred accessories. The temples of the Druids were not, like those of Egypt and Greece, properly buildings; but rather, they were arrangements of stones in the nature of an avenue, leading to other arrangements of the same material, which surrounded the altar; for, they held it impious, to interpose any impediment between themselves and the object of their supplications.

The only occasion, on which, as I recollect, they even

even admitted stones on each other, was in those surrounding the altar; where they placed on every two, a third, laid from top to top, and thereby uniting them: but, these stones were not hewn into form, or wrought into elegance, they possessed neither ornament, nor polish, but, rough as they were found, they were deposited with infinite labour in the places assigned them. Much debate has been maintained concerning the learning of the Druids; I shall only say, that, while they could contrive to remove, and to adjust, ſuch enormous masses as would embarrass the most expert of our modern architects, even in this age of science, their works demonstrate their abilities; and, the very remains of them, in part, supply the absence of recording volumes, which the Druids never used.

Druidical erections were so generally uniform, and similar, that, having noticed one, we have little more to add; whereas, the temples of the more Eastern nations, after their principles were once adopted, continued increasing in dimensions, and in magnificence. Having composed, and adjusted, one row of columns, a second was added. The frontispiece of the building too, became an object of attention, and, much decoration was bestowed upon this part of the structure; first, by pilasters, or pillars, partly inserted in its walls; then by a range of columns somewhat advanced from the sacred edifice; afterwards a second and a third range of columns were introduced, further to ornament and complete the entrance.

By similar degrees were equal honours bestowed on

on the sides of the building, and ranges of pillars, forming walks for the contemplative, were conſtructed on its wings; for, since it was not possible in all places where temples were situated, to surround them with groves, their architects planted, as it were, columns in their stead; thereby, endeavouring to supply that deficiency, and manifesting their own abilities in decoration, in contrivance, and in magnificence.

The internal structure of the temples of antiquity deserves attention; for the holy and the moſt holy were not equally accessible. It was after the general splendour of the building, and especially after the magnificence of the portico, had struck the mind with solemnity, that the worshipper entered the sacred enclosure; and that not on every occasion; for, most of the offerings made on the altar, were presented on that *before* the temple; not on any within the temple; and here terminated many, if not most, of the sacred ceremonies. But, when the worshipper had entered the edifice, properly called the temple, beyond the first apartment into which he entered, was the adytum, or the most profound receſs, underſtood to be the residence of the tutelary Deity. Now, as these apartments had no window, whatever were the rites performed within them (in imitation of the venerable gloom of the consecrated grove) they were performed in obscurity; or, torches and lamps, added their dim lustre to the mystic ceremonies. Nevertheless temples dedicated to a variety of Deities, were constantly open at the top; whether, supposing such an assembly to resemble that of the

the Gods on Olympus, or whether to provide against errors in their votaries, who might, by mistake, worship a wrong God of the *assortment*, I will not determine.

I could wish to communicate to my auditors some idea of the extreme magnitude of that scale on which some places of worship among the ancients were composed: and therefore shall select a few instances of the most famous and the moſt remarkable.

The general distribution of the Egyptian temples we learn from STRABO, who thus describes it.

" This is the disposition of the building of their temples. At the entrance of the sacred place is a pavement of stone, its breadth an hundred feet, or perhaps something leſs, but its length three or four hundred, and in ſome places more: this is called the *court*, or approach.

" Along the whole length from thence, on each side of its breadth, are placed stone sphinxes, twenty cubits, or ſomewhat more, distant from each other, so that there is one row of sphinxes on the right, and another on the left. After the sphinxes there is a great *vestibule*; as you advance farther there is another *vestibule*, and likewiſe a third, for the number is not limited, either of the *vestibules* or of the ſphinxes, but is various in different temples, according to the lengths and breadth of the courts. After the vestibules is the temple, having a great anti-temple, or *nave*, worthy of admiration.

" The sanctuary was of a moderate size; there was no carved images of the human form, but only of

some brute animal. On each side of the anti-temple are what they call wings; these are two walls of equal height with the temple, at first distant from each other a little more than the breadth of the foundation of the temple; afterwards, as you advance farther, they incline towards each other fifty or sixty cubits. Theſe walls have sculptures of great images resembling extremely the Tuſcan and ancient works among the Grecians." STRABO, *page* 805.

But, as some specific instance may impart yet clearer ideas of the extent of theſe buildings; I shall select from HERODOTUS his description of the temple of *Bubastis* in Egypt.

The approach to it was by a road, which separating two canals, had the appearance of an island; each canal being one hundred feet wide, and reaching from the Nile to the front of the edifice. The gates which formed the first entry were sixty feet high, and the size of their ornamental figures six cubits. The inclosure contained a wood of sacred trees, very high, planted around the body of the temple, wherein was the statue of the Goddeſs; each side of the inclosure being a furlong in length. Near the entry was a high road, paved, conducting to the public square, and bordered on each side by lofty trees, aspiring to the sky.

The magnificence of the temple of SOLOMON, I need not repeat, because it is a subject with which we all are familiar; but when we consider the happy coincidence of riches, skill, and devotional resolution, which distinguished its erector, we need not doubt of the extreme magnificence of SOLOMON's sacred edifice.

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The temple of SOLOMON has long since ceased; the ploughshare of desolation has uprooted its foundations: of other most superb instances of human abilities, scarce any traces remain; the pyramids alone, firm by their erection, and permanent by their form, continue to demonstrate the veracity of those accounts which describe contemporary, or posterior, erections.

A few temples in Greece, indeed, juſt serve to excite our melancholy reflections over fallen grandeur, and to relate the ravages of barbarism and ignorance; if beside, the laborious and ventureſome architect can trace from pillar to pillar, and from arch to arch, those proportions which once infused solemnity into the spectator, or elegance into the building, it is all the age of PERICLES can boast.

And what further can we say of the ruins of Rome? the immense thermæ of voluptuous luxury; the noble temples of magnificent superstition; whatever was costly, or sumptuous; whatever was ſplendid, and exquisite, were associated in Rome: In Rome, where we now meet with—here and there a temple—remaining, but changed; here and there—an obeliſk—but broken; here and there—a portico—a pillar—a frontispiece—but mutilated and imperfect. Triumphal arches, designed to perpetuate to eternity the actions of Emperors, and of warriors, are decayed; and consecrated Apotheosi (attributes of Deity) are mouldered into dust; yet enough remains to render credible the writings of the historian, which describe these in their splendour, and to excite admiration at the abilities of the artists who composed, and constructed them,

Mark how the dread PANTHEON stands;
Amid the domes of modern hands,
Amid the toys of modern state,
How nobly, how severely great

These the northern ravagers destroyed: But, the Northern ravagers had their taste, and their style, and their ſkill too, and let us do them the juſtice to acknowledge, that it was not deficient in expreſsion: like their poetry, which abounded in animated imagery, and bold phraſeology, wild and irregular, yet often pathetic and lofty, void of conduct and plan, yet vigorous and affecting; so their architecture was peculiar and barbarous; diſsimilar in its parts, multifarious, and injudicious, in its ornaments; confuſed, and perplexed, in its diſtribution. But, if the ages of ignorance wanted gloom, the Gothic architecture was gloomy; it was correſpondent to the hood, the cowl, the beads, the superſtition of the times, and, even now, has great effect in producing solemnity and reverence, and striking with awe the man of obſervation. Nor were the mechanical parts of architecture unknown; nor would many of our preſent architects be able to surpaſs the bold projection, and the lofty roof, which Gothic magnificence has left, as monuments of its abilities and emulation.

Gothic architecture is a striking inſtance of the neceſsity of order; for, if the architects of the times alluded to, had ſtudied uniformity and symmetry, I think it not impoſsible they might have diſcarded, by degrees, those labyrinthine ornaments, with which they endeavoured to conceal

dispro-

disproportion; and, by reducing the effect of their productions to the scientific principles of regularity and plan, they might have shewn, that their manner was susceptible of effects, peculiar and restricted, no doubt, yet, effects not always disgusting, or even despicable.

Let me here, be permitted to consider the peculiarities of national style, as no insuperable hindrances to merit: according to the opportunities of persons, so should we estimate their productions. That which would be very inferior from an Artist of these enlightened nations, would deserve our applause from an Indian of America. As the pictures of QUINTIN MATSYS, if not equal to RAFFAELLE, are yet highly laudable from the blacksmith of Antwerp; so the carvings of the Islanders in the South Sea, though not comparable to the living marbles of PHIDIAS, and CLEOMENES, yet are instances of much patience and skill. And, for my own part, I would even praise some labours of the Chinese, if in return their vanity would but allow that Europeans also possefs the gift of fight, and are not totally void of understanding.

Be it always remembered, that the natural and moral, situations of mankind, occaſion a diversity both of sentiments and of necessities: consequently, a diversity of inventions, to satisfy the principles of the first, and to prevent the inconveniencies of the latter. Thus, in Egypt, where they have no rain, but excessive heats, the roofs of the temples were almost flat; for what need had they of a water-course?—but, to guard against the sultry climate, the

the edifices were low, in proportion to their extent, and every method was adopted to procure a ſtream of temperate air, or a breadth of cooling ſhade. To accomplish this, a forest of pillars supported an enormous superstructure, and the colonade almost forbad the light of the sun, that it might shut out his beams.

In Attica they had rain, and therefore raiſed their roofs to throw it off: in Attica they had the cooling breeze, and therefore might venture to elevate the column from four, or five, diameters, to eight or ten: in Attica the people were addicted to mirth and festivity, and the character of their buildings was correspondent to their cheerfulneſs. Elegant proportion, therefore, was studied here; and to adorn their edifices with splendor, was agreeable to the disposition of a people so "merry as the Greeks:" while the voluptuous Roman expended his riches on decoration; covered with ornament every part of his structure, in defiance of expence; and lavished in wanton effusions of magnificence, real or imaginary, the ill-gotten revenues of conquered provinces.

There remains yet to notice an order of religious buildings, different in many respects from any of the former; for, Christianity, though at first obliged by persecution to perform in obscurity much of its congregational devotion, yet desires not obscurity as agreeable to its genius. On the contrary, when well understood, it is cheerfull and animating:— what has, it then, to do with the darkneſs of the oracular cave, or the madness of midnight orgies?

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it has no mysteries forbidden to be divulged on pain of death; no *(aporetta mysteria)* things too *sacred*—no, says the Apostle—using the same term, things too *vile* to be diſcloſed. The devotional structures of Christianity, therefore, may desire windows; like him, who, when promised by his architect, that his house should be so constructed, as not to be inspected;—"rather," said he, "let what passes there be open to all beholders:" or like him, who wished for an opening in his breast, that the integrity of his heart might be visible to all. Yet, with cheerfulness combining solemnity, the religious edifices of the Christian dispensation are happily calculated, in their principal requisitions, to afford ample scope for the abilities of an architect.

We have in our own country abundant instances in proof of this assertion; but one may be sufficient to mention: for, whoever has examined the cathedral of St. PAUL at London, has seen magnificence in proportion, and regularity in diſtribution, united to a remarkable lightneſs in construction: strong, not heavy; elegant, not gaudy; and perhaps as happy an instance as exists of the *simplex munditiis*; neither penurious, nor extravagant.

It is natural to suppose, that peculiarities correspondent to those which distinguish the religious edifices of any period, should also characterize the civil erections of the same time. When superstition inveloped the mind in gloom, no wonder the mansion was rather a castle than a house: the contracted window juſt admitted light enough to exchange darkneſs for obscurity; and to permit that hospitality

hospitality, which, in some degree, corrected the ferocity of ignorance. But, as learning dissipated the clouds of barbarism, the advantages of a just taſte became more conspicuous, and gradually displayed themselves in the superiority they imparted to domestic residences. Hence, in towns, splendid palaces, magnificent offices, comfortable dwellings, and spacious streets; in the country, noble seats, and decorated retirements; the elegant pleasures of a gentleman's villa, or the salubrious enjoyments of the ornamented farm.

With regret we omit to instance correspondent improvement in the public buildings of the British nation: our national palace, our senate houses, and most of our public offices, are, and till lately *all* were, totally unworthy of this great people; but we have made a beginning, and it is to be hoped the case may hereafter be changed; and that, following our example, posterity may be induced to complete the undertaking.

At preſent, I apprehend, the science of Architecture is no where more cultivated, or better understood, than in England; many of the seats of our nobility, and gentry, attest this truth: and, though in most of our towns, our brick edifices are not equal in appearance to the stone buildings of certain cities abroad; yet in finishing, in convenience, in distribution, and in neatness, we very much excel them, and, while the real enjoyments of life continue to be of more intrinsic value and consequence than the tinsel of external finery, may this distinction ever be characteristic of the British Nation!

OBSERVA-

OBSERVATIONS

ON THE

PLATES BELONGING TO

LECTURE I.

ARCHITECTURE.

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PLATE I.

No. I. PLAN of a simple cabin, or primitive dwelling: and may be conceived as representing also a primitive structure for worship; suppoſed among the Egyptians, Phœnicians, or other early people.

No. II. A similar cabin; but surrounded by an inclosure, and defended by a hedge, a wall, or some other simple defence, which indicates ſacredness.

No. III. An edifice, whose ruins still exist at Syenna, in Egypt: by the simplicity of its structure, it seems allied to the former.

The body of the building is preceded by a portico much larger than itself, having only *one* row of columns. This edifice has been thought to be an observatory; but that does not prevent its having been a temple also. The inclosure is to be conceived as correspondent to the enlarged proportions of the edifice: this article must evidently be regulated by circumstances of convenience, or ability, and is therefore omitted.

No. IV. A temple, whoſe ruins are at Eſſnay in Egypt. This porch had *two* rows of columns; and the temple itſelf is divided into more apartments than the others, probably to accommodate a family.

No. V. A temple whoſe porch had *four* rows of columns; and which had in front a large area, with a colonade on the sides. By the space of the building, from wall to wall, this edifice is conjectured to have been open at the top. The ruins are in Egypt, at Etfou.

No. VI. Exhibits the immense additions made to temples in proceſs of time: here we have (1) (at bottom of the plan) prodigious obelisks, or other decorations of that nature, for the door-way. Having entered the building, we have (2) an extenſive and multiplied colonade; in fact, a forest of pillars. Having passed another door-way, we have (3) another colonade (of single columns), and probably open at top, in the center at least; which leads into an open square (A) in front of the temple itself, colonnaded on the sides, with double ranges of pillars (5). A very magnificent portico of columns, &c. precedes (6) the entrance into (B) the sacred edifice; in the interior of which (C) was probably the adytum, also the statue of the Deity, with a vestibule (D) behind it. It is evident that many apartments, &c. might eaſily be constructed around, and within, this temple, for the accommodation of numerous attendants. Around the whole may be ſuppoſed approaches through avenues of trees, and sacred groves; or public roads, canals, &c. The ruins are still visible at Luxxor in Egypt.

PLATE

PLATE II.

No. I. It has been thought very probable, that the Israelitish tabernacle in the wilderness resembled in its plan that of the temples of the times, especially thoſe of Egypt: as appears in this figure, where the sacred edifice itself is ſituated in the center of the inclosure, which is a kind of colonnade.

No. II. May impart an idea of the front of the tabernacle; which ſeems little different from thoſe of other temples, except in the temporary nature of its materials.

No. III. Plan of the temple of the Serpent Knuphis in Egypt; a sacred edifice, surrounded by an area; the inclosure not wholly a continued wall, but in part composed of columns.

No. IV. Elevation of the same structure: the pillar in the middle of the *door-way*, was more probably the result of necessity, than of choice, and seems to indicate the great antiquity of this structure.

No. V. Another Egyptian temple; in composing which, the architect has endeavoured to add to its dignity by a very large area, colonnaded, (*a b c d*) having a portico. The temple (A) is much like some preceding. Vide No. V. Plate I.

No. VI. Is an idea of the temple of SOLOMON, surrounded by an inclosure; having on each of three sides a magnificent entrance (A B C); and on one side two entrances (DE). These buildings (as A) were fifty cubits long; from them to the porch of the temple was 100 cubits; the porch itself fifty cubits; and the court of the temple (R) 100 cubits broad. S is the holy place. T the most holy place. *x x* chambers of the prieſts, constructed all round the temple; not adjoining to it, but separated from it by the little interval *u u*.

PLATE III.

No I. Plan of a temple, explaining the ſuppoſition of the neceſſity for propping the roof by a row of ſupports *throughout the middle of the building*, as hinted in the LECTURE, and partly exemplified in the *door-way* of the temple dedicated to the Serpent Knuphis; Plate II. Nos. III. and IV.

No. II. Frontiſpiece of a temple ſlightly ornamented: *i. e.* with two pillars at the door-way, and a pilaster at each corner of the projecting walls which form the portico: called by the Greeks the ANTES.

No. III. Plan of such a temple.

No. IV. Shews further progress in ornament, the front portico being formed and decorated by an *advanced* row of columns, making in effect a double colonnade: it has also a row of columns at the back front. This kind of temple was called PROSTYLE.

No. V. Plan of such a temple.

No. VI. Shews the addition of a detached range of columns *all round* the temple; also of several steps for elevation and additional grandeur. This kind of temple was called PERIPTERAL, in allusion to the kind of *wing*, which the columns form to the temple.

No. VII. Plan of such a temple.

No. VIII. This temple has *two rows* of columns, in its portico, and all round; with a flight of many steps in front and behind: and frequently all round. This kind was called DIPTERAL, or *double-winged.*

No. IX. Plan of such a temple.

No. X. A temple in the center of a colonnaded inclosure. The ruins of one like this are thought to exist at Athens: It differs from the Egyptian, in having a colonnade in front of the inclosure; also in the proportions of the temple, &c.

PLATE

PLATE IV.

No. I. TOWER OF THE WINDS at Athens: an octagon temple, of which hereafter. *Vide* Plate VIII.

No. II. Plan of the temple of JUPITER OLYMPIUS at Athens: according to Pausanius, the area was a furlong in length on each side. The temple itself is dipteral; and, according to the general mode of the Greeks, is in length more than double its breadth.

No. III. A Roman dipteral temple: in length just double its breadth.

No. IV. Elevation of the PANTHEON at Rome: a circular temple, of which hereafter.

No. V. Plan of the PANTHEON.

No. VI. Plan of a temple at Baalbec: in which we notice, besides an immense flight of steps, a colonnaded portico and vestibule: the first court (A); the second court (B), very large; the portico (C); the body of the temple (D). The temple is DECASTYLE, *i. e.* has ten columns in its front portico.

No. VII. Elevation of its portico.

PLATE V.

No. I. An idea of the subterranean catacombs, or burial-places; wherein, during persecution, the early Christians are said to have assembled for worship. These were of different forms, as accident or contrivance regulated their construction or excavation. They are found in Rome, Naples, Egypt, &c.

No. II. An ancient church; the plan from PALLADIO.

No. III. Plan of the ancient St. PETER's at Rome.

No. IV. Plan of the famous SANCTA SOPHIA, at Constantinople; now a Turkish mosque.

No. VI. Plan of St. MARK's church at Venice.

No. VII. Section of the church of St. MARY *of Flowers* at Florence.

These churches shew, especially, the progress in construction of domes, and cupolas: *i. e.* of circular coverings, resting on quadrangular foundations; which form of sacred edifices is peculiar to Christian structures for worship: not having been practised by the ancient architects. *Vide* the HISTORY OF ART.

PLATE. VI.

No. I. Section of the AUGUSTIN's church at Rome.

No. II. Plan of the AUGUSTIN's church.

No. III. Section of the present St. PETER's at Rome.

No. IV. Plan of St. PETER's at Rome; with the colonnaded area, &c. which forms the approach.

No. V. Exhibits the usual construction of churches in catholic countries; with chapels round the sides. This is the plan of the chapel at VERSAILLES.

These six plates are intended to impart some idea of the progress of architectural decoration and construction; the designs are mostly drawn to the same scale, except the very small ones, (especially the small *elevations*) which are *enlarged*, to render them somewhat more intelligible. We observe, on the whole, that the attempts of succeeding ages at sublimity or magnificence, were constantly directed to surpass their predecessors in the magnitude of their structures, and in the consequence of the approaches to them. Whether so much attention bestowed on approaches, has not often injured the effect of the principal building, is doubtful.

N. B. These plates trace the progress of sacred edifices in various countries, as

In Egypt, Plate I. II.
In Greece and Rome, Plate III. IV.
Of Christian churches, Plate V. VI.

PLATE

PLATE VII.

No. I. Front elevation of a temple of that kind with ANTES, *i. e.* ornamented only by a pillar on each side of the entrance; and the projecting wall of the temple with a pilaster (properly the Antes). The order is DORIC.

No. II. The portico *advanced*, decorated with four pillars (correspondent in situation to those of the *Antes*), the rest of the building plain. This kind was called PROSTYLAR, or PROSTYLE. The AMPHI-PROSTYLE had a similar portico in the back-front. The order is IONIC.

No. III. Beside the advanced portico, now containing six columns in front, the roof is projected on both sides of the building, forming a walk between the body of the temple and the colonnade. This kind was called PERIPTERAL. The order is CORINTHIAN.

No. IV. A frontispiece, having eight columns in front; also two rows of pillars, *advanced* from the body of the temple, on both sides, forming two walks. This kind was called DIPTERAL.

No. V. A PSEUDO-DIPTERAL; which, seen in front only, has the appearance of a dipteral: but it differs, by the absence of the *interior* row of columns, the space between the body of the temple and the external row of columns, being vacant; and making only one walk, of double the usual width.

No. VI. Has ten pillars in front, but only two side walks; the body of the temple comprising an extent equal to six pillars. This kind was called HYPÆTHRAL, *i. e.* open to the air: forming a kind of cloisters internally, and generally containing many deities.

PLATE VIII.

Hitherto we have attended only to temples whose forms were square, or allied to square, as parallelograms, &c. This temple, THE TOWER OF THE WINDS, at Athens, is octagon.

This plate also shews the nature of a *Section*, *i. e.* the *inside* of a building, seen geometrically, as if the front wall was supposed to be absent: also, of a *Plan*, *i. e.* the *foundation* of a building supposed level with the ground. The peculiar construction of this roof, occasioned by the form of the building, is seen in the section, and also in the plan of the roof; to which we have added the names of the eight winds, whose figures with their attributes are ſculptured on the outside of the edifice.

This building is still existing tolerably entire at Athens: and is used by the Turks, as a kind of mosque, or place of worship. The worship maintained in it, is of a peculiar nature, and consists of a perpetual whirling motion, performed by the devotees, to a melancholy music; having turned round swiftly, till their heads are giddy, they kiss the ground and retire.

On each face of this edifice on the outside, are remaining the lines of the sun-dials which formerly occupied them: theſe are among the most ancient of the kind remaining.

PLATE IX.

CIRCULAR TEMPLES.

No. I. Monument to the honour of LYSICRATES, a victor in the public games, at Athens; called by the modern Greeks, (but without authority), the Lanthorn of DEMOSTHENES. This is one of the most elegant little buildings existing; the peculiar richness of the roof, and of the entablature, merits notice. It is supposed, the tripod won by LYSICRATES, stood on the top of the ornament on the roof.

No. II. Section of the monument of LYSICRATES.

No. III. Elevation of a temple at Tivoli, commonly called the SIBYL's temple; but rather dedicated to VESTA.

No. IV. A MONOPTERAL temple, *i. e.* having but one row of pillars, which support the roof, and being open, without any wall to form the body or cell of the temple.

Circular temples have a very pretty effect, in gardens, pleasure grounds, and parks: and they are much used in such decoration.

PLATE X.

No. I. A circular PERIPTERAL temple, *i. e.* having one row of pillars, advanced from the body, or cell of the temple.

No. II. Its plan: wherein the walk between the body of the temple and the colonnade, is very evident; the altar (when inside the temple) or statue of the Deity, is placed in the center: but in total darkness.

No. III. The circular temple at Baalbec: wherein we observe the columns advanced from the body of the temple, as in the *peripteral;* but affording no space for a walk around it, because connected to the temple by the circular sweeps of their pedestals, entablatures, &c.

In these four plates we have attempted to convey to our readers a more distinct idea of the nature and variety of temples, &c. than was possible on the small scale of the preceding plates, where our object was, by comparison with each other, to shew the general progress of this branch of art; and, indeed, as only by *comparison* can distinct ideas of their differences be obtained, we have been solicitous to arrange these in a manner favourable to that intent. We have not thought it necessary to give *plans* of all theſe buildings, as most (*i. e.* the square) may readily be understood from plans already given; and that given of a round structure requires little variation to render it applicable to all of that form; and is further assisted by the plan of the Pantheon, and some others, introduced on a larger scale, at the close of the following diſcourse.

End of the Plates belonging to LECTURE I.

LECTURE

LECTURE II.

LADIES and GENTLEMEN,

THE difference between the works of Omnipotence and those of such feeble beings as ourselves, is never more apparent, than when we consider the principles, and the progress, of our attempts at magnificence, or sublimity. What extensive preparations! what unremitted labour! what accumulated toil! what united efforts! are necessary to erect a pile, which ſhall impress a spectator as somewhat above the common; whereas, with what ease does the Majesty of Heaven will, and it is done, command, and it is accomplished; and this on a scale infinitely beyond the competition or conception of puny mortals! If we seek sublime in terror; vast rocks, awful precipices, immense mountains, ſtrike us into trembling: if in serenity, the celestial expanse is sublimely serene. If we seek an instance capable of both; observe the smooth surface of the liquid plain; the immense pool is motionless: or if, obedient to the wanton zephyrs, gentle undulations creep over the transparent ocean, its languid murmurs die along the shore. Sublimely beautiful! placid, benign! the canal of industrious commerce! the liberal distributor of abundant wealth!

wealth! the friendly union of distant nations!—is this that element, which anon ſhall rouze its resistless fury, in tempestuous billows foaming against the heavens? shall roll its circling eddies in restless agitation, and open its profound recesses! deep as the grave! obscure as the shadow of darkness!

The works of Omnipotence are simple principles, applied to a variety, an infinite variety of purposes; distributed into effects apparently distant from their causes; into divisions whose origin seems scarcely related to its offspring: not so are human productions: these, are an assemblage of various smaller articles, combined to form one whole; they are collections from distant quarters, composed, compounded, arranged and regulated, with much patience, contrivance, and ingenuity. To procure them is the province of labour: the sinewy arm must exert its strength to separate, or to secure, the wanted materials; and vigorous efforts of united force, must be well plied, and well directed, to move and to adjust the cumbrous mass: but, to place this mass to the best advantage, to correct it into symmetry, to decorate it with delicacy and effect, is the province of genius; of genius, happily assisted by knowledge and skill.

The company I have the honour at present to address, will readily forego a relation of the labours of the quarry, or the toil of the brick-kiln: our attention, will be, I hope, more agreeably engaged, on that part of architectural science which regards rather principles, than practice.

We attempted to illustrate a former subject (*vide* LECTURE III. of the first series), by a reference

to

to some of the principles of this science; in which we considered UNIFORMITY, or SYMMETRY, as appearing with great effect in the labours of the architect; and indeed, the presence, or the absence, of this principle, is among our first observations, whatever be the instance we inspect. Its absence is notorious in many gothic erections, and is a principal cause of that discontent, perhaps disgust, with which we survey those erections. Every composition of art requires that some part should be more conspicuous than the rest; that some distinguished portion should more immediately impress itself on the mind of the spectator, which he may, without hesitation, fix on at once as the direct object of his attention. In composition of architecture, this is a requisite altogether indispensable: but, if all parts of an edifice are alike, we distinguish no principal portion; or if all parts of an edifice are unlike, we experience, at least, equal perplexity, in guessing at what should be the principal portion. Moreover, the impressive effect of composition, is not proportionate to its details, and its *minutia*, since these require time to be examined, and understood; but the effect is proportionate to the quantity of parts which are calculated to strike the spectator, at once:—*This* may be pretty, and *that* be delicate; but, unless the aspect of an edifice has previously raised an expectation of delicacy, and a conception that the subject deserves such attention, the finishing, though exquisite, will appear frivolous, or misplaced: and therefore, instead of applause, may possibly meet contempt.

There

There is nothing very sublime, I believe, in the firing of a musquet, or of a dozen, or a score, of musquets in succession; but the same quantity of report employed in a large cannon, by its united effect, and instantaneous explosion, produces much *greater* sensations. The sublime of a single voice, vociferating *huzza!* is very moderate, let the voice be prolonged, or the shout repeated as long, or as often as may be; whereas in the roaring of a multitude combined, there is something grand; now, if this roaring be regulated by happy modulation, and disposition, it becomes a chorus, and is unspeakably improved in effective grandeur, principally by the power of symmetrical arrangement. So, in architecture, that composition will be most successful, which brings the greatest quantity *to bear* on a spectator *at once.* Let me not be misunderstood; quantity, *i. e.* extent merely, is not my meaning; since the capacity and intelligence of a spectator to survey and comprehend them, do not increase with the increased dimensions of a fabric; but, I mean that happy arrangement, which, by symmetry and distribution, enables the eye to comprehend the composition, and its beauties, with the readiness of perception.

Thus, at a blow, are cut off the intricate multiplicity of projecting corners, closets, ſtaircases, towers, and turrets, which abound in some structures: with all labyrinthine windings, and vermiculated decorations, which rather speckle, than adorn, the external of buildings: and, by reducing ornaments to those of facile comprehension, we forbid much useless labour which has often been injudiciously

ciously, perhaps injuriously, lavished. I think also, that this principle demonstrates the general superiority of Grecian architecture: ornaments are ornaments; their effect is, to produce diversity; those of one shape may please as well as those of another; but, in the larger and more important principles of art, in conception, and in composition, an error is more serious and far less retrievable. We place, therefore, a symmetrical distribution, which shall distinctly express the design of the edifice, and indicate its noblest parts, as a *sine qua non* in architectural composition.

But, by symmetry, do we exclude VARIETY? certainly not. We merely forbid licentiousness;—variety run mad. We commend a diversity of forms, provided those forms be regular; and we exclude no variation, but such as tends to weaken the general effect. In fact, variety is equally necessary as symmetry; and equally necessary as either variety or symmetry, is, that propriety, and FITNESS, which to insure success, must regulate every exertion of art.

No proof is required, I presume, that, according to the intended use of a building, it may vary in parts and dimensions. A parlour requires not the magnitude of a cathedral: nor am I of WILLIAM RUFUS's opinion, that Westminster-Hall is fit only for a bed-chamber. Propriety not only never need be separated from elegance, or magnificence; but, magnificence or elegance are peculiarly offensive unless accompanied and regulated by propriety.

In requiring, therefore, the most suitable proportions for an edifice, we must previously understand its destination; for, according to its use, must be its magnitude; and according to its magnitude, must be its proportions. Various instances prove the power attributed to this principle by the architects of antiquity: where a colossal building, for instance, required extraordinary altitude, they proportioned the members of the orders which composed it, not precisely, and exactly, as they would have done, had each been separate; but, allowing for the effect of perspective, and its influence in diminishing proportions, they determined their parts accordingly, adapting them to those stations from whence their effect was moſt likely to be estimated. Such variations of the parts of buildings imply correspondent variations in their general dimensions, to answer particular purposes.

Moreover, the destination of an edifice regulates, beside its proportions, all its decorations. I readily grant, that we may worship the Deity with equal sincerity, and with equal acceptance, beneath a roof of thatch, as beneath a splendid dome: yet, I cannot say, therefore, I would recommend a cottage for a cathedral; on the contrary, where multitudes assemble to worship, I would wish to render their worship commodious. Together with meanness, this concession prohibits whatever is gaudy, or glaring, since these contribute (often greatly contribute) to distract attention. In this respect, all comparisons between the rival churches of St. Peter's at Rome, and St. Paul's at London, are greatly in favour of the latter.

I much

I much mistake, if splendid decorations be analogous to the design of a house of prayer, which is the simplest and most direct idea of an edifice for worship: Are they not rather, likely to excite that admiration of the artist's abilities, which is inconsistent with the intense humility of devotional supplication? Let us imagine ourselves entering a superb edifice, viewing on either hand fluted columns, and pilasters of exquisite workmanship, supporting highly ornamented arcades, surrounded by statues of great merit, and by pictures of most sublime composition;—we advance further into the building; we observe the wreathed pillars, and the angelic figures; we look up to the dome, look around to the aisles, look forward to the altar; the whole is enriched with scrolls, shells, foliage, and festoons; with every device of sculpture, and painting, with every ornament of human art: Is there nothing in all this to bewilder our attention, to dissipate our reflection, to amuse, rather than to augment the reverence which brings us to this sacred temple?—But St. PAUL's has no such profusion of magnificence; the structure is indeed grand, but simple in its parts, and plain in its ornaments: no pictures, and little sculpture; nor do I wish to see its sculpture much augmented, except perhaps, by monumental erections to those great men, who may deserve of their country to have their memory so honourably transmitted to posterity; and these might be placed in the circumference beneath the dome, to great advantage.

I confess, I think the humbler parish church is

more happily adapted to its purposes than the gaudy St. PETER's; but, I would not confound a parish church with the dwellings of the parochial inhabitants around it. It requires distinction, and variety, in its ornament, as in its construction; nor am I Puritan enough to suppose, that pillars at the porch, or pilasters within, would hinder the fervency, or the acceptance, of devotion.

We look elsewhere then for the seat of decoration, and magnificence; where the senate of a great nation, the representatives of a powerful and opulent people, meet to regulate their power and opulence; where royalty erects its throne, and the seat of government is apparent; where foreign visitants are received with due distinction, whatever be their rank; and where, if ever, pride, national pride is laudable, there introduce the rich entablature, the ornamented moulding, the polished shaft; there exhibit the flowing wreath, and the gracefully-pendant festoon: but beware even there, that dignity be not lost in decoration, or genuine elegance be enthralled by lavish profusion.

Or, if the nobles of the land wish to erect mansions suitable to their estates, we commend the intention; their patronage will encourage art; in return, art will supply conveniencies not otherwise to be procured, and elegancies not otherwise to be enjoyed; art will furnish personal accommodations adapted to their conspicuous situations, and splendid distinctions correspondent to their exalted dignity. By what powers, or means, art will succeed in this attempt, I proceed now briefly to notice.

There

There are certain principles in which every erection intended for habitation must of necessity agree; such as, that it should be a defence from the vicissitudes of the seasons; that it should be a commodious receptacle for property; that it should permit the necessary avocations of nature, and contribute to safety and satisfaction as well by night as by day, and so on. These are but a part, though a very important part of architectural study: indeed, it is not easy to notice the variety of which architecture is capable, much less to render it improving, or entertaining: nor is it my present design, to enter into a detail of carpentry, and perplex my auditory with the distinctions and applications of beams, timbers, girders, joists, and rafters; these we leave to whom they may professionally concern; but we shall attend somewhat to the leading and standard principles of building, and then turn our attention to those compositions which profess to impart peculiar elegance.

Having thus attended to the necessary properties of a building, let us now advert to the nature, and the application of its ornaments.

In a former discourse we remarked, that, to increase the magnificence of their temples, the ancient arthitects augmented the number of their columns; and, that whenever elegance was necessary, recourse was had to columns: What is there in columns which entitles them to this distinction? or, are they all equally elegant?

There seems, I think, little reason to doubt that trees were the first supports to buildings of considerable

siderable size; and were, most probably, inserted into the walls, to sustain, either an upper story, or, beams of considerable weight, on which the roof rested. The strength which they contributed, when by attentive genius rendered regular, brought them into use; and by progressive improvements, they increased in importance, and in ornament.

There remain in some early edifices, very remarkable indications, that ancient architects, in erecting stone buildings, did little more than substitute one material for another; they have imitated very closely the courses, and the appearances, of those beams of wood, which were necessary to be laid from part to part, for additional support. It is true, they ornamented these marbles, but without excluding the appearance we have mentioned; and had we now extant the original attempts at this substitution, probably the likeness might be yet more explicit. This is very apparent in certain parts of the orders: let us therefore now turn our attention to the orders; and to this circumstance, among others, belonging to them.

The orders are usually reckoned five: the Tuscan, the Doric, the Ionic, the Corinthian, the Composite: not that the difference is throughout considerable between these orders: for, between some of them the variation is rather in their ornamental parts than in their general principles, or their apparent conformation.

The Doric order of columns is considered, I apprehend justly, as the most ancient. The earliest Doric specimens remaining, usually consist

sist of the following parts: (1) the shaft of the column, which goes strait into the ground, or which rests on a step, without ornament, or moulding of any kind at the bottom, to form a base; and, this absence of the base occurs, notwithstanding the shaft may be decorated with flutings, which indicates a progress in ornament. On the upper part of the shaft is (2) the capital; the form of whose members, in early instances, seems to convey an idea of preſſure by supporting considerable weight; over the capital, is (3) the architrave, and (4) the frieze, which correspond exactly to so many pieces of timber, laid one over the other, and from column to column. (5) The cornice, by its projection, seems intended to protect the under parts from the injuries of the weather; and very probably, was originally designed for that service.

Some have said, that, the Doric column was proportioned to the form of a well-shaped man; and the Ionic was imitative of a delicate woman: It might be so; but I am not without suspicion, that this resemblance, and its application, was discovered *after* the invention of these orders: it seems to me an ingenious after-thought grafted upon them, arising, from observing their different decorations, and proportions, In fact, the manly Doric not suiting well the lighter kind of edifices, it was natural to think of lengthening the shaft, or tapering its diameter, which in effect is the same: nor was it difficult to enrich, or to elevate the entablature, when lightness and elegance were wanted to characterize the structure in which the order was to be employed.

The

The volute, which forms a very important part of the capital of the IONIC column, bears some resemblance to a ram's horn, supposed to be hung on a pillar (we know such ornaments were placed around altars); as the trygliphs of the Doric order are considered as having originated from the sacred lyre; and the heads of sheep, or of oxen, which adorn the Metopes, from those parts of animals slain for sacrifice. It is, indeed, likely that most ornamental appendages of the orders, originated from some accidental occurrence, or from some ceremonial custom: thus, the torus of the base is thought to have been suggested by the passage of cords, or bands, with which the pillar was bound to ensure its stability; or, of those cords which, having drawn up a canopy, were wound around a pillar to secure them. If, indeed, the priests (who were usually poets also) hung their lyres on the walls of their temples, they might suggest the idea of the trygliph; and, when once such an ornament is adopted, what prevents other implements from being esteemed ornamental, and appropriate also; as shields, &c. to the God of War, and foliages of the various sacred trees, to their respective divinities, around whose temples they grew.

Those persons who have doubted, whether architecture was capable of expression, seem never thoroughly to have considered the distinction of the various orders, or their natural progress. I think it evident, that, in early times, sacred edifices were decorated with the Doric order; and, thereby, it seems not unlikely, that an idea of sanctity became connected with it. It might be thought, perhaps

perhaps, too serious for places of pleasure, and diversion; and a lighter, more airy, and ornamented style, might be required for such gay erections.

To characterize the orders, I should say, the Doric is manly, and firm; the Ionic is beautiful, and delicate; the Corinthian is magnificent: but the magnificence of the Corinthian was perfected long after the others had been employed, and had become popular.

Concerning the capital of this order, is related, one of those accidental instances of good fortune, which usually occur to those only who by their merit deserve such favours, and are qualified to improve them. The history is to this effect: With that kind of regard which we shew to the memory of those we love, a nurse of Corinth, whose child was dead, brought out her play-things, and placed them in a basket before her tomb; the basket happened to stand on a root of Acanthus, which, springing up around it, formed by its leaves a decoration that perhaps had been frequently paſſed unnoticed by the eye of ignorance. But, the effect of knowledge is, to instigate the mind, and to direct its researches. Whatever is beautiful, whether common, or uncommon, is an object of attention to the well-informed, and this history is one proof of it: for, the sculptor CALLIMACHUS passing by the tomb, was pleased with the elegant appearance of the basket, thus decorated by the luxuriant Acanthus; and, having made a design from it, he afterwards used this new, and beautiful, ornament to embellish the capitals of columns. Correspondent to the

gaiety of this decoration, the proportions of the CORINTHIAN order are taller, and more superb, than those of its predecessors.

These three orders are, in fact, all that a just taste would think necessary, since one, or other, of them suits almost any kind of structure; but as it is usual to reckon the orders as five, we shall mention the TUSCAN, and the COMPOSITE.

The Tuscan order is, in its principles, nearly allied to the Doric, and is, either the Doric order injured, by want of skill in those who employed it, or, perhaps, a transcript, or imitation, of it, when in its early stages; which, by being carried into a remote country, never arrived at perfection. As to the Composite, that is an union of the Ionic, and the Corinthian orders, which, however it may succeed in some cases, in others it spoils both.

It is evident, if we trace the progress of columnar proportion, that it continued increasing in height, till the judgment of the architect was convinced he had sufficiently tapered, or lengthened, his column: and perhaps, it is not easy to determine, whether was deserving of most applause, that judgment, which, by perpetual improvements, advanced to a certain point; or that, which having reached this point, was convinced of the impropriety of passing beyond it, and forbore to force art beyond her abilities.

The proportional height of many very ancient, perhaps, the most ancient, Doric columns remaining, is but four, or five, of their diameters, next the base; by degrees, however, they were proportioned to six, and afterwards to seven, or eight, including

cluding bases and capitals, which latter (capitals) are but small in structures of remote antiquity. As to pedestals, it is clear, as they had no bases, the columns of this order could have no pedestals.

The Ionic column was elevated to nine diameters, including the base, and the capital, and thereby acquired a lightness which the Doric did not possess; the members of its entablature also were proportionally elevated, to correspond with the delicacy of the column: and now, pedestals were introduced, as imparting greater height to the order, without disturbing its parts.

Ten diameters were given to the Corinthian column; and its entablature was varied, of course. Beyond this, we have no rules for proportionate, or regular, architecture; and we find, that, (as in some Gothic buildings) where pillars of more slender dimensions are adopted, they must be placed in combinations of several together, one alone being weak, and insufficient for strength either real, or apparent.

The effect of an order is very much determined by the projections of its parts, (which constantly should preserve a certain ratio to their heights) and depends greatly on the shadows such parts will cast when in their proper places in the building. Therefore, it sometimes happens, that where a bold proportion is given to the members of an inferior order, it shall acquire a greater appearance of dignity, and produce a more forcible effect, than a richer composition, or more delicate workmanship.

Besides being susceptible of the highest decora-

tion, the orders impart an appearance of strength to a building; they seem to contribute support, and stability, which evidently is of much importance in architecture. Now, as it is contrary to every idea of probability, that the weaker should support the stronger, the elegant support the robust, or the delicate the sturdy; therefore, in determining the situations of orders over each other, we must regard their respective characters, and proportions; and their fitnesses for the services required from them.

According to this view of the subject, the Tuscan order is fit only for places little exposed; and where gross strength is a principal recommendation; therefore, being the stoutest of the orders, it is used at the bottom of buildings, and in lowermost situations.

More noble than the Tuscan, though not so elegant as the Ionic, the Doric order is placed between them; and, like the direction of wise counsel, regulates the whole composition, though unnoticed by the perception of ignorance:—Upon the following principles,

It is clearly necessary, that columns, when above others, should stand immediately over the center of those beneath them, and not be removed on either side, which would be absurd. Still more absurd would it be, to place three columns as supports to four, and so on. It being, I say, necessary that the same perpendicular line should pass, centrally, through the superior and the inferior column, and the distance from column to column in the Doric order being regulated by the Metopes, (which

(which must be square) and by the Trygliphs, (which are half a diameter of the column, and which must be placed immediately over the column) it follows, that according to the Metopes and Trygliphs, must be situated the Doric column; and correspondent to the Doric, must be placed the Ionic directly over it, and the Corinthian directly over the Ionic. For, these orders being lighter, as they are more elevated, are unfit to support those beneath them, and therefore are regulated, not only in their situations, but also in their proportions, by the proportions of those below them. Observe likewise here, that there is a natural alliance between those orders whose proportions are most nearly alike. To employ the Tuscan order to support the Corinthian, though it is very well able for such employment, is to sustain a light weight, by a prop adapted to a heavy load, consequently, it is misplaced; not to mention the too great opposition between the magnificent richness of one, and the rustic plainness of the other: but, when the Corinthian order is supported by the Ionic, the affinity is pleasing; or, when Doric columns sustain Ionic columns, though apparently well calculated for this purpose, as being strong, yet their strength seems to be suitably employed, and not wasted.

For the proportions of the parts of the orders between themselves, and each other, I refer to the examples. I consider as very censurable those breaches of distinction, and appropriation, among the orders, which have sometimes been fashionable, through the influence of masters whose abilities might

might have been better employed. It seems to me idle to say, "I wanted embellishment in that instance, and therefore have decorated the Doric pillars, and entablature, equal to the Corinthian: I have given it a capital of leaves, roses in its abacus, and have embellished an ovolo in its cornice with eggs and darts." This confusion, I say, ought to be avoided; since, if all this richness, was proper, or necessary, why not use the Corinthian, or the Ionic, at once? If these orders were unknown, the excuse of necessary ornament might be pardonable; but, while character is allowed to be of importance, it should be adhered to: and even if urged by what is thought necessity to a deviation from it, which, I am persuaded, is not often the case, it should be deviated from as little as may be.

Propriety is, I think, the just director on all occasions; and very far am I from supposing, that general regulations are perpetually to be enforced. I would not ornament a mile-stone with a capital of Acanthus, because it was so many diameters high; it would be misemployed: nor do I think the worse of those great architects, who have chosen the Tuscan, though the least elegant order, for the pillars which perpetuate the memory of TRAJAN and of AURELIAN; because, these pillars being immense masses, standing alone, and being decorated with historical sculptures, are out of the usual applications of art. Moreover, we have but to consider the effect of perspective on the lengthened shaft of a taller pillar, to perceive that the uppermost ranges of figures in such erections, must have been

been rendered, if not nearly invisible, yet greatly confused and indistinct: and, I doubt not, that if Sir CHRISTOPHER WREN had been engaged to erect, as a monument of the fire of London, a pillar whose shaft was to have been historically ornamented, he would have preferred, for that reason, the Tuscan order to the Doric.

As to the variety of minor ornaments which may be introduced in architecture, it is too extensive (I might say almost infinite) to be now repeated: character, and appropriation, is all I shall insist on as necessary to be observed in this article. For, who would approve of ornamenting the residence of a general officer with lyres, and myrtle foliage? or, a lady's bedchamber with trophies of the stern God of war? But, when Blenheim is building to commemorate a victory, let not trophies be absent from thence; or, when a senate-house is erecting, forget not the symbol of eloquence (a Caduceus), or the Civic crown.

Architects have debated, whether human figures were, or were not admissible, as external terminations of the upper parts of structures. It is said on one side, that figures are the most elegant terminations, that they may be symbolical also, and, that all the world knows they are stone: which reasons are urged in answer to those who remark, that they are placed where nobody would choose to stand, or, indeed, could stand long with safety; and they are exposed to all weathers, which neither Gods, or Goddesses, if they represent such subjects, nor human beings, if they are meant for mere mortals,

mortals, would be able to endure; that other symbols, if symbols are necessary, might be equally expressive; and that, beside what elegance may be found in other kinds of terminations, true elegance is inconsistent with absurdity. These reasons are so strong, in my opinion, that I survey without pleasure those unhappy figures, which are condemned to a situation whereat humanity shudders: and very rarely may such ornaments be adopted without trespassing against propriety.

Nearly allied to the foregoing article, is, the order of CARYATIDES, which is, a substitution of figures, generally female, (for when male figures are used, it is then commonly termed PERSIAN) instead of pillars. Its origin, we are told, was this: when the Persians invaded Greece, the town of Caryata, instead of combining with the rest of the Grecian cities, in defence of their common liberties, made a truce with the invaders, and thereby weakened the hands of their countrymen. In resentment of this behaviour, after the defeat of the Persians, the the Greeks attacked, and took, the town of Caryata; they condemned the inhabitants to slavery, and dispersed them among the cities of Greece; also, to render them instances of greater severity, they forbad them from wearing any other dresses than what they had already adopted, and by which they were ever after distinguished, go where they might. And, further, in order to perpetuate their disgrace, the architects, and the sculptors, of those times, composed an order of figures, to which they gave the name of Caryatides; and these they represented in slavish, and disgraceful, attitudes.

It

It is not necessary for us to take up these ideas on the Caryatic order; but, whether it be applicable to purposes of ornament in present circumstances, is all we have to consider. I think, for reasons already alledged, this order is little adapted to external decoration: it is true, they are now chiefly composed of allegorical figures, such as deities, virtues, nymphs, &c. but, methinks, to expose the virtues to all risques, and to every injury, on the outside of a building, seems in some degree to indicate their little influence on the master within; at least, they furnish the sarcastic with such reflections. An instance, not dissimilar, was the equestrian statue of LOUIS XV. in the place *Louis quinze* at Paris, by BOUCHARDON; the pedestal being supported by the four cardinal virtues, gave rise to a pasquinade, to this effect:

> What a comical fellow is this BOUCHARDON!
> His work we complain of as grievouſly wrong;
> His VICE here on horſeback he ventures to ſeat,
> While the cardinal VIRTUES are under his feet.

There is yet another reason, which I think insuperable, wherefore figures should not be used in external decoration of buildings; which is, that be their dimensions what they may, the eye will never judge them to be so much larger than life, as they really are; and therefore, being unable to augment its estimation of them proportionately to the magnitude of the building, it will diminish the building by an estimate correspondent to its ideas of these figures. It is easy to conceive from hence, how

greatly a structure may lose of its just importance by this diminution; and perhaps we have an instance of it in that particular of St. PETER's, which I formerly noticed, (LECTURE I.): for, if the perspective effect is so far deceptive to those who examine the great altar, as to induce them to estimate the figures at only half their true size; where is the wonder that a similar error should regard the whole dimensions of this building as less than they are, since it is crowded with abundant objects, each of which may contribute to such deception? It is a fact, that at the first survey of this church, strangers always judge it to be less than they find it, after they become better acquainted with its various parts. I know this has been accounted for, by supposing its arcades are too high; perhaps, however, both reasons may unite.

After having disapproved of too much ornament on the outside of buildings, I shall indicate where, in my opinion, ornament may be suitably employed; and that too, without fear its delicacy should be overlooked: I mean in those apartments which, in most, I might say, in every, capacious structure, are appropriated to festivity, and hilarity. Here let the composition, the effect, and the ornaments also be festive, and hilarious; whatever may attract or delight the eye, whatever may diversify and embellish the scene, shall here reign uncontrolled. For, though a visitant would appear sufficiently aukward if employed in examining the exterior ornaments of a structure, while its owner waited for him at the entrance; yet in the drawing-room, or in the

the cabinet, what forbids his enjoying the satisfaction of the artist's design, the delicacy of his workmanship, the finishing, and the propriety, of his embellishment, or the striking effect of his composition? Here also the lighter orders apply, and their magnificence is better within our view; here, too, if symbols are introduced, a spectator may have that time in which to ascertain their nature, and their application, which he could scarce bestow conveniently on the outside of the edifice.

There will always be a diversity of opinions on the effects of many parts, especially the ornamental parts, of every composition, (otherwise taste would constantly be alike, and variety would be excluded); yet, the primary and leading ideas of sciences which have been the constant study of mankind, are not now to be quitted, or exchanged. The innumerable occasions, and circumstances, which arise, and which require particular adaptation, afford ample opportunity for the exertions of architectural ſkill; and where, by happy contrivance, or foresight, or by judicious remedy of defects, and impediments, from whatever cause arising, an artist overcomes difficulties, or improves capabilities, let him have his just, his full share of praise. Natural genius is not confined to any spot, or to any people; and, in my mind, the constructor of Pont-y-prid bridge, in Wales, though a mere mason, or a mere country carpenter, may vie, as a man of genius, with the author of the Rialto.

The science of architecture is of great extent; it has produced many huge folios; many more it will

produce; and it may justly claim the character of "making many books, to which there is no end." It will not, therefore, be expected from me, (however desirous of imparting information) that I should be able to comprise within the limits of an evening's discourse, the whole of a study so multifarious, and extensive.

But, notwithstanding our attention to those principles of architectural decoration, upon which this science may be said to value itself, has been somewhat lengthened, I cannot exclude from this lecture a few remarks on those humble, but not less happy structures, which without pomp, and parade, contribute to the enjoyments of human life; they raise no envy in the spectator, by their grandeur, or their ornaments, but, if acquainted with their inhabitants, he admires, and esteems, the benevolence, philanthropy, and decorum, which inhabit them, virtues which are not symbolical, but actual, and active. Our sea-girt isle has many such; where every comfort of life, and whatever is really valuable abounds, where genuine ornament, both of mind and person, is liberally acquired, and where human life rolls on with pleasure and delight.

Who would not wish in such an habitation to pass his days! not indeed that the habitation, merely, insures this felicity, though certainly it may promote it. If, therefore, any of my auditory should have occasion to erect such a fabric, let them first consider well the situation of their proposed dwelling:— not in a bottom, where an amphitheatre of surrounding hills forbids every opening prospect; where

where rushing waters melancholy roar, and the winter's torrent sweeps all before it; where rushes are the only ornament of the mire, and vegetation is suffocated by mud:—not on a steep hill, whose rapid acclivities are of long-winded measurement, and laborious ascent, on which the rude blasts of the bleak north wind beat full, and whose hollow howl is the melancholy music of the cold-confined inhabitant. But, where the easy descent affords an enlivening view, a view which excites exercise, repeatedly to enjoy it, and which amply repays the gentle exertion; where the promenade may be diversified by variety, and prolonged by novelty, there seat your dwelling, especially if vegetation flourishes, and if the waters are plentiful, and salubrious.

Shall I describe a dwelling for such a situation? let it be, without, simple and plain, but uniform and symmetrical; decorous, yet varied; void of frippery, but not of taste: the entrance, advanced to meet a friend, offers pillars of the modest Doric only, graced, perhaps, with a basso relievo; this conducts to the entry, adorned with simple pilasters; but in the dining room, and the parlour, the order changes, and with it changes the style of decoration. The garden front, is perhaps embellished with Ionic pilasters, raised a step, or two, above the gravel walk: here display "flowers of all hue, and every fragrant scent:" a little further, evergreens may compensate in winter for the room they occupy in summer. If, on either hand, clumps of lofty trees, or plantations of shady groves adorn the sides, they complete the scene, without interrupting

ing the prospect. What enjoyments are distant, we must enjoy at a distance; nor wish the river diverted from its channel, to conduct it through our garden canal: No, let it be a public benefit; it shall add to the pleasure of the prospect, and perfect the view by its traffic, its meanderings, and its resplendence. Here, health and serenity, here peace and tranquillity shall fix their residence; here shall life glide on imperceptibly; here shall body and mind, acquire strength and improvement: here will we exercise our important prerogatives as rational, and immortal, beings, whose views extend beyond the narrow compass of this limited globe, and, who await above the ſkies, not merely habitations, but MANSIONS, of felicity.

OBSER-

OBSERVATIONS

ON THE

PLATES BELONGING TO

LECTURE II.

. . . . . .

THE series of plates to the former discourse, exhibited the progressive additions which were made in succeeding times to the edifices intended for sacred services: the present series of plates will explain, first, the principles, the constructions, and, the parts, of structures; and afterwards, will offer examples of several of those buildings, and other erections, which are esteemed the most important and perfect of their kind.

PLATE XI.

CONSTRUCTION OF HUTS.

This plate attempts to shew the progress of mankind in the construction of their dwellings.

The CENTER compartment, by the rock opening into a cave, in front, suggests the idea of those times when the situation of the first settlers was such as to force them into dwellings of this nature. Shelter they might afford, but not convenience; also being fixed to a place, they were not calculated for men of roving dispositions; who more probably, would construct huts, resembling those seen further off. The flatter kind of hut, might serve in dry countries;

countries; but in countries exposed to rain, the taller and conical form would be most useful. This continues to be the form of the buildings (the churches) in Abyssinia to this day, because of its utility in throwing off the very great rains.

The other design shews a frame work, constructed pretty much on the principles of the Doric order. This attempts to account for the *Trygliphs* by the effect of the principal rafters seen in front, as in the frieze (the architrave being one plain timber) while the mutules appear to originate from cross rafters forming the cornice. It is likely these two ideas should be kept separate; as no building requiring so heavy a roof, as this quantity of raftering implies, should be supposed as yet erected.

The LOWER design shews the manner in which the Hottentots construct their huts; viz. by a frame-work, rising into a top, which they cover with skins, the fire-place being in the middle. The inconveniencies attending this kind of architecture need not be enlarged on, as certainly, it shall not be recommended.

The UPPER division represents a Hottentot town; and is a proof that those people are not destitute of ingenuity; as they drive their flocks, &c. into the center, and by blocking up the entrance, render access to them very difficult.

These constructions seem to indicate the earliest stages of art: and something like these was probably the inventions of most wandering ſettlers.

PLATE

PLATE XII.

PROGRESS OF THE DORIC ORDER.

IN No. 1. we observe, the uprights are merely trees, placed as supports to the impending timbers; the insterstices between them being filled up with mud (or clay) walls. The Architrave is a solid beam, laid on the walls from end to end: and the Trygliphs are in this instance accounted for, by supposing them the ends of the cross-beams which support the roof. The Cornice is merely thick boards projecting to cover the whole.

In fact, this is little more than the center figure of the former plate filled up, with mud walls.

No. 2. In this example this composition begins to assume an air of regularity; the trees are not only stripped of their bark, but smoothened and rounded; they have also a base, (perhaps somewhat too early) and a kind of trencher Capital. The Trygliphs here seem to originate from the insertions of the cross timbers to the frieze-beam on this side; and the mutules immediately over them, from the ascending beams which support the roof. The Cornice is formed by the projecting of the covering of the roof; which is composed of thick boards, and plastered over with clay.

The transition from these rude essays to more regulated proportions, may be easily imagined, or gathered from what has been already delivered.

PLATE XIII.

EGYPTIAN TEMPLES.

No. 1.—Shews an Egyptian temple: that of the HAWKS in the island of *Philæ*, in the Nile; which is entirely open at the top; and indeed, though it may be called enclosed at the bottom, yet as that enclosure reaches only part of the height of the pillars, if not too high to be overlooked, it might permit spectators to view what was passing within the sacred precinct.—This idea is well known to have been adopted in the temple at Jerusalem. From NORDEN's *Designs in Egypt.*

No. 2.—Is its plan.

No. 3.—Is a temple directly the reverse of the other; being entirely under-ground: so that whatever services were performed in it, must have been performed altogether by torch-light. Whether it was (as is probable) dedicated to the infernal gods, or whether it was principally the sepulchre of three great persons, to whose memory their posterity maintained great attention, and to whose honour they might perform certain solemnities, or rather whether it might not unite both of these purposes, is wholly unknown.

By its plan, No. 4. it appears to consist of a large chamber in the center, with three tombs in it, regularly placed in recesses: the fourth recess being occupied by the door-way. Probably these tombs are placed according to the four cardinal points of the heavens. The whole is of good workmanship; and cut in the rock; it is at Necropolis, probably, the City of the dead: near the old port of Alexandria in Egypt. From NORDEN.

PLATE XIV.

PROGRESS OF EGYPTIAN TEMPLES.

THIS plate endeavours to illustrate the progress of Architecture, especially in regard to the number and position of columns in temples. To effect this,

No. 1. Is a real view of the cabin of an Arab family as constructed in Upper Egypt: from the rudeness and simplicity of this erection, it may justly pass for a close imitation of the original dwellings of the inhabitants in the earliest ages. We remark upon it (1) that it totally excludes the sun; shade being of all things most desirable in this part of the world; (2) that it is enclosed on three sides; (4) that it is partly enclosed on each side of the front, leaving only the center open; (3) that it has a prop on each side of the door-way; also (5) a prop almost in the middle. Certainly when Mr. NORDEN drew this cabin from nature, he was not aware of its relation to the temples of Egypt; yet it seems so truly primitive, that the ideas connected with it admit of little doubt.

No. 2.—Is an elevation of the same cabin as supposed to be seen directly in front.

No. 4.—Is an elevation of the temple of the *Serpent* KNUPHIS on the island of Elephantine in Upper Egypt, in which most of the peculiarities we have noticed in the cabin occur; not indeed that it is wholly closed up on the sides, though nearly; but the closure of the front on each side of the door-way, and the position of the pillar in the middle of the door-way, are strong features of similitude.

No. 3.—Is the same cabin with its door-way, supposed to be so far extended as to require two props instead of one: these props also are not of one single stem, but a number of lighter materials, (as canes or reeds) united for strength, and bound round by cords, or other materials.

No. 5.—Is a view of the temple at *Taetfa* in Upper Egypt: wherein we see the adoption of the mode of placing two columns in the door-way; we see also that this temple, being entirely covered, not only receives light from the door-way, (which is usual) but also on the sides, from the vacancies (resembling windows) left in the upper part of the wall. The position of these vacancies is such as might admit light, but not heat.

No. 6.—Is the temple at *Komombu* in Upper Egypt: this offers a frontispiece of three pillars in the door-way; these pillars also nearly resemble a number of canes, or reeds, tied together for strength; notwithstanding, they have handsome capitals, &c.

No. 7.—A view of the temple at *Deboude* in Upper Egypt; having four pillars in front; and being pretty much closed up, yet preserving a door-way, with windows on its sides.

Thus we have selected authentic instances of temples, having one, two, three, and four pillars in front: the addition of more may easily be imagined after these specimens.

PLATE

PLATE XV.

EGYPTIAN TEMPLES.

No. 1.—Is a view of two chapels, cut in the rock, at *Tshibel Esselsele* in Upper Egypt: they shew the prodigious labour taken by the patient inhabitants; their workmanship is excellent; they are internally covered with hieroglyphics; there is a separation for the holy, and the most holy place—the latter being most ornamented. The pillars on the sides of the entrance deserve notice, as well for their symmetry and handsome arrangement, as for the peculiarity of their bases, which, though whimsical, are ornamental. As these are undoubtedly more ancient than any instance of Doric pillars, yet have bases, they prove that ignorance was not the cause of the omission of the base in the Doric order: whose proportions these pillars somewhat resemble. Their capitals were in part imitated in Greece.

No. 2.—Is the temple of the serpent *Knuphis*. The front entrance to it has the great inconveniency of only a single pillar, and that standing in the middle of the door-way: but this temple differs from others, in having a kind of cloistered space around it; wherein, perhaps, the priests walked and conversed. It is probable this cloister might answer to the holy place, and the enclosed edifice to the most holy. The most holy place seems to have had no light but from the door-way; and that, by reason of various obstructions, could be so little, as barely to afford liberty of worship in it. Shall we suggest that the junior priests were admitted into the cloister only, and the elder alone in the central inclosure?

No. 3.—Is its plan.

PLATE XVI.

EGYPTIAN TEMPLES.

No. 1.—Is the temple in the middle of the city of *Essenay* in Egypt. This has six pillars in front; of that kind united and bound together: they have handsome capitals; and each capital supports a block, forming a kind of architrave, which runs the whole depth of the temple. The front is partly enclosed on the sides, notwithstanding the number of pillars, and the great space they occupy: the centre seems to have had a handsome entrance between the two central pillars; whence, it is probable, the other pillars were united by a low wall: the present wall seen between them is merely an erection of the Arabs, for the purpose of confining their catttle; but it may indicate where the former wall stood: and, perhaps, the low wall still exists, as this building is evidently greatly buried in the sand of the country. This must have been a capital building in its primitive state: the number of pillars, their beauty, their being bestowed on the interior of the temple, as well as on the front, the extent of the roof, the hieroglyphics, the handsome ornament running round the cornice, and the capital winged globe over the entrance, justify this idea.

No. 2.—Is its plan.

PLATE XVII.

SUGGESTED PARTS OF COLUMNS.

BECAUSE of the curiosity of the subject, in connexion with its relation to Architecture, as being a constant ornament on the temples of Egypt, we have introduced a distinct representation of what is usually termed the winged globe.

It consists of three parts; a globe in the center, a kind of dragon, (but altogether an ideal kind, as I believe) and a prodigious pair of wings: the wings, are, probably, the symbol of protection, defence, and swiftness; the dragons, of perpetuity and watchfulness, (from the circumstances of the serpent tribe seeming to be renewed by changing their skins, and their sleeping with their eyes open). The globe, either of the land (principally) of Egypt, or of the earth at large, *q. d.* "To the Deity who perpetually protects the land—of Egypt." Some persons think the idea is relative to the course of the earth, as a planet, round the sun. The handsome effect of this ornament has been already seen.

No. II.—The capital of a column of the gallery of the principal court of the temple of Isis on the isle of *Philæ* in Upper Egypt. The ornaments of it are evidently borrowed from nature—being the leaves of an Egyptian water plant common on the Nile.

No. III.—A capital from a fragment of a column found on the isle of *Philæ:* which appears to be a hint borrowed from the palm; and capable of very great elegance. The upper row of leaves resemble full-grown leaves; under them is a row of young shoots; the lower are a kind of squamose projections, which are changed at the bottom. I think a judicious application of a hint from this capital would make a noble gallery of columns.

PLATE

PLATE XVIII.

SUGGESTED PARTS OF COLUMNS.

No. I.—The story of the Acanthus basket: which has been already given; shewing how the elegant capital of the Corinthian order might originate.

No. II.—An enlarged view of that kind of united (or reeded) column which we have already seen: it is surmounted by two rows of water-lily flowers, whose simple and elegant cups greatly enrich it, without the appearance of much labour: the head of Isis above it, is singularly introduced; but perhaps not more so, than the author of this would have thought of the cherubim heads which adorn our churches, &c. It is the capital of the columns of the interior court of the temple of Isis, on the isle of *Philæ*.

This No. also shews the nature, and effect, of an Egyptian entablature: its differences from the more refined productions of Greece are easily remarkable.

No. III.—Is another design considerably like the former; but differing, in the shaft of the column being smooth, and the divisions (or reedings) restricted to ornament the top of the column: whereby they become part of the capital. The leaves of this capital seem to be fluted; and are by no means so simple as the former. It is a capital of a column of the temple of Isis in the isle of *Philæ*.

The plans of the columns shew by their lines the projections of the leaves of the capitals: the shadowed part being the shaft.

PLATE XIX.

EGYPTIAN PILLARS.

FROM noticing parts of columns, we proceed now to notice the column at length; and therefore have selected two instances, both of which shew that the design of the bases we noticed in Plate XV. must not be considered as general in Egypt; but, that however they might be adopted when to ornament a rock, yet when support was requisite, a firmer base was employed: In fact, the simplicity of these bases seems to date at a very early period, and before that part of the column was much considered in respect of ornament. As to the shaft of the column; in one it is quite plain; the other recalls the idea of those we have already seen, composed of several small pillars united into one; whereby the general resemblance of this pillar is not very distant from some in later ages, denominated GOTHIC: for if each of these smaller pillars had a capital, the composition would be almost exactly like some in our ancient churches.

As to the capitals of these pillars, they are greatly alike: the first is indeed very plain; the second is more ornamented, but by no means equal to some we have seen. The idea of the numerous fillets in the neck of the pillar, seems closely allied to that of a number of cords, whose office it is to bind the composition together; at least, to secure the steadiness of the shaft. The first is one of the columns of the portico of the great temple, the other is one of the columns of the vestibule of the great temple, at *Luxor*, the ancient Thebes, in Egypt.

PLATE XX.

EGYPTIAN OBELISKS.

IT is fortunate for the reputation of Egyptian Art, that although most of its surprising productions live only in the report of those foreigners who were admitted to see them, when standing in their places, as designed by their authors, yet enough remains of some of its works to justify those accounts which describe others as yet superior.

When we can trace a building a mile in extent, and this has been mentioned as not the largest, we are induced to receive, as true, the accounts of the largest, although *that* may have perished in the revolutions of ages. On this principle, when we view, with surprise, the great obelisks at Rome, which we know to be Egyptian; we can credit relations which represent others as of yet larger dimensions. Especially, as we know that the highest we have, has been originally higher. Be that as it may, as the obelisks are among the greatest of the Egyptian works come down to us; we have selected three for the inspection of our readers.

The obelisk in the middle of the plate, is that in the *Piazza del Popolo* at Rome. *Pliny* reports, that it was procured from the quarry by *Sennesertus* king of Egypt, about the time *Pythagoras* travelled in that country, 522 years before A. D. It was brought to Rome, as appears by an inscription on the base, by *Augustus*; and from thence was called 'the obelisk of *Augustus*;' that prince placed it as a principal ornament in the great Circus, where no doubt it was very conspicuous, being one hundred and twenty-five feet high in a single stone, without the base. In the time of the emperor *Constance* it was only eighty-eight feet long, lying then thrown down in the great Circus; from whence *Sixtus* V. retrieved it, under the management of Cavalier *Fontana*. At present it is about 79 feet high, it is of a single stone, of beautiful granite, ornamented on all sides with hieroglyphics. What these hieroglyphics

phics really mean is not known: We are told that in the time of *Julian the Apostate*, *Hermapion* (an Egyptian probably) endeavoured to explain those on this monument, which he read thus, "The sun, the God, the Lord of heaven, has given to RAMESSES the empire of the earth! RAMESSES, son of the God, foundator of the universe, whose strength and valour has subjected the whole earth to his sovereign sway! immortal son of the sun, the embellisher of the city of the sun!" *Kirker* the Jesuit rejected this explication, but did not give a better.

As I conceive that it is likely this may be one of SESOSTRIS's famous works, consequently, older than *Pliny's* date, I think it just worth while to suggest that I would read the inscription thus:

"To the sun, God:
To the Lord of the heaven:
Who gave to RAMESSES *the empire of the earth!*
RAMESSES!
Son of the God—foundator of the universe,
After having, by strength and valour, subjected the whole earth to his dominion,
(Immortal offspring of the sun!)
Erected this
To ornament the city of the Sun."

i. e. *Heliopolis*, the ancient ON. This seems to be probable; and, in the instance of SESOSTRIS, we know to be pretty nearly fact.

The obelisk to the right is now erected in the *Piazza Navona*, at Rome. It was found broken in many pieces, lying in the circus of *Caracalla*, about two miles from Rome. This obelisk is small; is covered with hieroglyphics; and was erected by *Innocent XII.* to ornament the superb fountain of the *Piazza de Navona*, which flows around it.

The obelisk to the left is that in the *Piazza della Rotonda*, at Rome; though small, yet it is ornamental. Being desirous to shew the use of these immense masses as ornaments, we have introduced it, with the fountain, &c. which it embellishes.

N. B. The steps are an addition.

PLATE XXI.

BASES.

THESE Designs exhibit the Bases of the various orders together; whereby their differences and distinctions are rendered more striking: and the progress of their enrichment by additional members may be clearly seen, from the simple Tuscan to the replete Composite.

PLATE XXII.

MOULDINGS.

THIS plate is given in order to shew at large the true forms of these parts, and the centers from which they are struck by the compasses. It is of importance to commit their names accurately to memory: as one, or other, occurs in every piece of Architecture that can be inspected or described.

PLATES XXIII. XXIV.

PARTS OF AN ORDER.

THESE plates are explained by the writing upon them: they shew the members of the Doric and Composite Orders, whose names and situations being similar in the other orders, render further illustration unnecessary.

PLATE

PLATE XXV.

PROPORTIONS OF THE ORDERS ON THE SAME HEIGHT.

AS Plate XXVI. represents the Orders on the same module, shewing their increase in height, this Plate shews their increase in slenderness; and is designed to fix the general appearance of each Order more firmly in the reader's memory: and especially, the appearance and proportions of the column, when separate from its base and pedestal.

XXVI.

PROPORTIONS OF THE ORDERS ON THE SAME MODULE.

THIS plate shews the proportions of the orders to each other on the same module; the progressive elevation and tapering of the shaft, and the advances of richness and ornament, is apparent.

The difference of the Orders may be gathered by the eye from these subjects; as they are placed together for the sake of comparison: but their peculiarities will appear more distinctly in the larger examples.

PLATE

PLATE XXVII.

PRINCIPLES OF DRAWING THE ORDERS.

THE orders are generally measured by the diameter of their column at the bottom of its shaft, or by the semi-diameter: this diameter, or semi-diameter, is usually divided into sixty minutes; and, by these measures, the whole proportions of the columns are adjusted.

The TUSCAN column is in height 7 diameters.

The DORIC - - -	8
The IONIC - - - -	9
The CORINTHIAN - -	10
The COMPOSITE - - -	10

The perpendicular proportions of the columns being fixed, the other parts of the orders are adjusted to them.

The ENTABLATURES of the Tuscan and Doric, are in height one-fourth of the column: of the Ionic, Corinthian, and Composite orders, one-fifth. Which, by the diameter of their columns, is in this proportion.

The Tuscan entablature is in height $1\frac{3}{4}$ diameters.

The DORIC - - -	2
The IONIC - - - -	$1\frac{4}{5}$
The CORINTHIAN - -	2
The COMPOSITE - -	2

The PEDESTAL is comparatively a modern addition to the Orders, and is that on which the base of the column rests: its general height is one-

one-fourth the height of the column and entablature taken together. It is sometimes made lower, but never higher.

The PEDESTAL is divided into—the base (at bottom); the die, or square part (in the middle); and the surbase, or cap, (at the higher part).

The COLUMN is divided into—the base, the shaft, the capital.

The ENTABLATURE is divided into—the architrave, the, frieze, and the cornice.

IN drawing the DORIC order, erect a line of the just height required; one-fifth (as A. B.) is the height of the pedestal. Divide the remainder into five parts; four to the column, (as 1, 2, 3, 4, or B C) one to the entablature, (as 4, 5, or C D). The column divided into eight parts, as 1, 2, 3, 4, 5, 6, 7, 8) one-eighth is the diameter. The base is half a diameter (as from B, $\frac{1}{2}$); and the capital, half a diameter (as from $\frac{1}{2}$, C). The base of the column projects on each side one-third of a semi-diameter (as 1, 2, 3, 4): Exactly of equal projection to the base (constantly) is the die of the pedestal. The column diminishes at the top one-sixth of its diameter; beginning at one-third of its height, (as at *a*, *b*,) which ought to be divided into six parts; of which one is gradually diminishing as it ascends. The capital projects one-fourth of the smaller diameter (*i. e.* at top) of the column. The entablature is divided into eight parts (as between C and D); two to the architrave; three to the frieze, and three to the cornice. The architrave projects one-sixth of its height; the cornice projects one half

half of the height of the whole entablature; as shewn by the circular dotted sweep.

N. B. *The projection of the members of the Orders are reckoned from a line supposed to be erected in the center of the column, (unless notice be given to the contrary) when modules and their parts are used.*

In drawing the IONIC order, divide the original perpendicular line into five parts, (as a, b, c, d, e); one-fifth is the pedestal, as a: the remainder divided into six parts, (1, 2, 3, 4, 5, 6,); one-sixth is the height of the entablature, (as 5, 6). The column being divided into nine parts, (1, 2, 3, 4, 5, 6, 7, 8, 9) one-ninth is the diameter; the base and capital are each one-half diameter in height, (as a $\frac{1}{2}$). The column diminishes one-sixth of its upper diameter; the capital projects one-half of the semi-diameter of the column; the projection of the base is one-third of the semi-diameter. The entablature is divided into five parts; one part and half to the architrave, the same to the frieze, and two parts to the cornice. The architrave projects one-fourth of its height; the cornice projects equal to its height.

In drawing the CORINTHIAN order, divide the original height into five parts (as a, b, c, d, e); one of which is the height of the pedestal. Divide the remainder into six parts, (1, 2, 3, 4, 5, 6); five to the column, one to the entablature. The column divided into ten parts, (1, 2, 3, 4, 5, 6, 7, 8, 9, 10), one is the diameter; the height of the capital is one diameter and a quarter. The other dimensions agree with the Ionic order.

For

For the pedestal, divide it into four parts, (1, 2, 3, 4); the first is the height of the plinth; one-third of a part is the height of the lower base; one half of a part is the height of the upper base.

N. B. The COMPOSITE is similar to the Corinthian in its proportions.

In drawing the TUSCAN order, divide the original height into five parts; one is the pedestal: divide the remainder into five parts; four to the column, one to the entablature: the base and capital are each one semi-diameter. The entablature divides into seven parts; two to the architrave, two to the frieze, three to the cornice. The column diminishes one-fifth of its diameter; the capital projects one-fourth of the smallest semi-diameter; the architrave projects one-sixth of its height; the height and projection of the cornice are equal.

Pedestals in general follow the proportion of their order; but this part is varied according to circumstances. The pedestal of the Tuscan order is divided into four parts; one is the height of the plinth, one-half is the height of the sur-base; one-third is the height of the lower base. The projection of the base is equal to its height; and the projection of the upper base, or cap, is equal to that of the lower base.

These rules are very general, and are the nearest approach to regularity; but as the members of the different orders are not precisely alike in every composition, but vary according to the effect required, the proportions of the smaller members change of course. And, indeed, there are great variations in the general proportions of the orders among those remains of ancient art which are regarded as models of this study: thus, we have instances of the Cornice being in height half the entablature; of many members of the entablature being suppressed, and even of an omission

of the whole architrave and frieze; the columns supporting only the cornice. These instances, however, must be considered as licentious, unless we know the motives which actuated the architect in his departure from general and established principles.

The proportions of columns, also, are not always the same; but, even in many justly admired buildings, they are not so tall as the moderns make them.

FLUTING of columns is supposed to render their superficies more sensible; and, in consequence, to increase the apparent diameter of the column; so that a plain shaft seems thinner than one fluted.

Flutings should never exceed twenty-four in number, to the lighter orders; but twenty is sufficient for the Doric: In some instances, the ancients made only sixteen.

The flutings of the Ionic, &c. are separated from each other by a fillet of about one-third of the flute in width; but Doric flutings terminate *sharp* in the superficies of the pillar, without any fillet between them.

Sometimes the flutings are filled up one-third of their height with ornament; which, when well cut, has a rich effect: Sometimes they reach only one-third of the height of the shaft, the upper part being plain; and sometimes they commence at one-third of the height, and proceed to the top of the shaft, the under part being plain.

PLATE

PLATE XXVIII.

INTERCOLUMNIATIONS.

SHEWS the various distances of the intercolumniations, and their names, as given by the ancients. These examples shew at the same time the manner of representing plans of columns, with their bases and pedestals. The general effects of these various distances may easily be imagined.

The PYCNOSTYLE intercolumniations are distant from column to column, one diameter and a half of the column, measured at bottom. This is the nearest approach of columns to each other, except when they are coupled; in which case, the bases of the two columns may almost touch each other.

In the SYSTYLE intercolumniation, the space between the columns is two diameters.

In the DYASTYLE, three diameters.

In the AREOSTYLE, four diameters.

The EUSTYLE is two diameters and a quarter, and was by the ancients reckoned the most perfect; as being a happy medium between the thronged Pycnostyle and the scattered Areostyle; and as permitting also sufficient space for persons who had occasion to pass between the pillars.

When columns are coupled, as the increase of strength is proportionally augmented, the couples may be separated by a wider interval than single columns, without injuring the general effect. But four diameters is usually thought quite sufficient.

PLATE XXIX.

TUSCAN ORDER.

THE noblest instance we have of this order is *Trajan's Pillar;* but that is not a perfect specimen: neither, in fact, is any perfect specimen known, as a regular order, (notwithstanding some fragments united by PIRANESI in his temple of *Corá).* This plate we have taken from PALLADIO; who assures us he had seen it among the ancient buildings extant in his time, though now destroyed.

PLATE XXX.

DORIC ORDER.

THIS plate exhibits an example of the DORIC order, taken from the Theatre of MARCELLUS, at Rome: which is usually regarded as the most correct specimen of this order. It is, however, contrary to the precepts of VITRUVIUS, (who says, the dentils, as ornaments, are peculiar to the IONIC order) the cornice of this composition being decorated with dentils. The drops also beneath the corona instead of being horizontal, are somewhat inclined.

PLATE

PLATE XXXI.

DORIC ORDER.

AS this order has great merit and beauty, and is much encouraged at the present time, especially in lesser erections, where the strictness of its rules produces less confinement than in extensive buildings, we have added two plates of it, after Greek specimens, both being taken from ancient structures remaining at Athens. The first is very simple, the architrave being a single uniform member; the frieze having a decoration of olive crowns placed at regular distances: but the symmetry of the whole is very neat and pleasing; as also the projection of its members and their distinctness.

PLATE XXXII.

THE SECOND specimen is from the famous temple of Minerva at Athens: the pillar is fluted; the architrave, plain; but the frieze is decorated with tryglyphs, and the metopes are filled with figures. It is evident that this part of the order has been the favourite of the architect, who probably was the sculpture also, *(Phidias)* and who depended much on the effect of the excellent decorations which he proposed to insert. The whole of this fabric has a stately and venerable appearance, and an imposing air of grandeur.

Mr. Aikin has recently published an instructive Essay on this order.

PLATE

PLATE XXXIII.

IONIC ORDER.

THIS plate, and the following, offer specimens of the Ionic order, taken from such Greek examples as are now remaining. This of Plate XXXIII. has been thought to be the first building erected of the order (the temple at *Teos)*; it must be admitted to be a very handsome composition throughout.

PLATE XXXIV.

THIS SECOND instance is from the temple of *Erectheus* at Athens; the enrichments of this specimen distinguish it; those of the upper torus, and of the capital, especially; and peculiarly the conformation of the volute, whose spiral differs from all others known. It must be admitted that the architrave and frieze are excessively large, and thereby the cornice is deprived of its due proportion, and reduced to a mere covering of the lower parts: which need not be adhered to in any imitations of this order.

N. B. The effect of this order may be seen by the pillars, &c. of the inner door of the chapel in Greenwich hospital: where they were adopted by Mr. STUART, who studied them at Athens.

PLATE

PLATE XXXV.

THIS Ionic example is taken from the Temple of Fortuna Virilis, at Rome; which is usually supposed to be the most elegant instance of this order.

PLATE XXXVI.

THE IONIC VOLUTE.

AS this is the member which distinguishes the Ionic order at first sight, we wish to impress it on the memory of our readers: and the formation of it being a curious piece of geometry, we have given its principles, in the eye of the Volute at large, A. To obtain this, first strike the surrounding circle: within this, form a square (points upright) and prolong lines through these points to the extent required: the sweep from line to line will then include one quarter of a circle. Each side of the square bisected, gives the points for an inner square, and the place of one foot of the compasses to strike the first spiral, for the first quarter of a circle; beginning at 1, and sweeping the outermost quarter of a circle; then moving the compasses to 2, for a second quarter, and so on to 3, and to 4. The diagonal lines of the inner square divided into third parts, give the points for striking the other spirals; always going in a circular order, as 5, 6, 7, 8, for the first, or outer, divisions of

of thirds; and 9, 10, 11, 12, for the inner division of thirds, which completes the figure.

The capital of this order being very peculiar in its construction, has given rise to more than one manner of composing it. The ancients usually adopted that which appears in Fig. C. which, on one front had an ornament originating near the top of the capital, and continued spirally to a center. On the other front (or more properly the side-front) this ornament was omitted, and the correspondent parts were embellished with leaves, fillets, &c. as in our figure.

B. Represents a more modern capital, whose volute is the same on both its sides; and which being set angle-wise, has the same effect all round the capital. This volute originates from an ornament composed of eggs and darts, called the Echinus: between the originations of the volute is a flower.

PLATE

PLATE XXXVII.

CORINTHIAN ORDER.

AN example of the CORINTHIAN order, from the PANTHEON at Rome: the richness of this capital deserves notice. The ornament marked with a star, is a side view of the Modilion: of which those on the same line with it are front views. The base of this order has a greater number of mouldings than the Ionic, to increase its richness.

PLATE XXXVIII.

COMPOSITE ORDER.

THIS example of the COMPOSITE or ROMAN order, is from the Arch of TITUS at Rome. The Base nearly resembles the foregoing Corinthian: the Capital is composed of the Corinthian acanthus, &c. but instead of the caulicoli, has superadded the echinus and volutes of the Ionic order. The cornice alfo (which in this instance is of great height) has the Ionic dentils, as well as the Corinthian modilions. There is always danger, lest these ornaments should too nearly refemble each other; the dentils, therefore, should be smaller in proportion than in their proper order, and the modilions larger. The ornamental frieze of this example shews of what decoration that part is capable. The whole of this order is richly ornamented.

PLATE XXXIX.

FRONT ELEVATION OF THE

TEMPLE OF FORTUNA VIRILIS,

AT ROME:

ALSO,

SIDE ELEVATION OF THE SAME TEMPLE.

PLATE XL.

PLAN OF THE SAME TEMPLE.

THIS is given as an instance, not only of the general and customary construction, and distribution, of Heathen temples, but also, of a square temple, exhibited on a larger scale than any yet introduced.

We are to conceive of temples in ancient times as standing in a considerable area, wherein was the altar: there was also, usually, an ascent to the edifice by a flight of steps, (A) which led to the portico (B); after which was the entrance, and the first apartment of the temple, properly speaking, (C); beyond which was the second apartment (D): wherein was the statue, or symbol of the divinity. This apartment was accessible only to the priests, it being considered as the most sacred *adytum*—chamber, of the whole structure.

PLATE

PLATE XLI.

FRONT ELEVATION OF THE

PANTHEON,

AT ROME.

PLATE XLII.

SIDE ELEVATION OF THE SAME PANTHEON.

THESE plates exhibit a circular temple, on a larger scale than any already given.

This temple was not dedicated to one deity only, but, as its name imports, several divinities had their altars in it, at the same time: these altars were placed within it, in convenient niches around the wall; they were dedicated to the principal deities of the Romans. The large niche opposite the door contained a colossal statue of Jupiter: Colossal statues of AGRIPPA, and of AUGUSTUS, were also placed in the great niches in the portico.

This temple was not only an edifice of great estimation among the ancients, and considered by them as a capital fabric, but it receives additional value, at present, by having escaped, in a great measure, the ravages of barbarians, and of time; so that it is supposed to be the most perfect Heathen temple now existing. It is not, however, at present, in its original splendour; its ornaments, which were mostly of bronze (and some of silver), being taken away from the inside; as are also its bronze gates, the ornaments of the portico, &c. Neither is the upper part of the portico as at first composed, having undergone modern repairs and alterations.

The portico is supposed to be an addition to the original circular edifice; by MARCUS AGRIPPA, whose name it bears.

PLATE XLIII.

SECTION OF THE

PANTHEON,

AT ROME.

SEEN IN FRONT.

PLATE XLIV.

SECTION OF THE

PANTHEON

SEEN ON THE FLANK.

THESE sections exhibit the internal construction of this building: shewing the places for the altars, and the decoration of the tabernacles wherein they ſtood (A, A) the effect of the supporting columns around the interior, &c. They shew also, the opening in the center of the roof, by which light was admitted: as was indispensable in a pantheon. The same opening which admitted light, admitted also rain, &c. but, beside, that this did not spread far from the center of the pavement where it fell, the pavement was gently inclined toward a drain, by which it was carried out of the temple.

PLATE XLV.

ELEVATION OF THE FRONT OF THE

BANQUETTING-HOUSE,

AT WHITEHALL.

THIS very elegant building was erected by INIGO JONES, as a specimen of part of an intended royal palace: a plan, which, if it had been completed, would have raiſed the British reputation in architecture above that of any other nation. The Banquetting-House is juſtly reckoned the moſt correct, as well as moſt elegant, ſtructure we have: In this ſeries it not only claims a place for its merit, but alſo as being an example of ſupercolumniation, or order over order: the inferior order being Ionic, the ſuperior Corinthian.

PLATE XLVI.

THE FRONT OF ST. PETER'S AT ROME,

Is given for the purpoſe of comparison with the portico of St. Paul's at London. The obſervations uſually made on this front, are, that the attic with which it is crowned, is much too high for the order beneath it; being more than one-third (which is the uſual proportion) of the ſupporting order. Moreover, the pediment in the center is, for ſo large a front, very ill ſupported by four pillars, and ſhould have had ſix at leaſt: To which may be juſtly added, that the whole front being apparently of equal projection, the parts are not diſtinctly marked, nor is there any great effect produced by ſuch trifling ſhadows as the parts can caſt.

PLATE

PLATE XLVII.

ELEVATION OF THE WEST-FRONT OF

ST. PAUL'S,

AT LONDON.

PLATE XLVIII.

SIDE-ELEVATION OF ST. PAUL'S.

THIS Plate, and the former, shew the composition of this noble building, and its distribution: the motion of the parts (*i. e.* their variety and situation) is very happy, and the magnitude of the center is grand. It must be observed, that in so large a building the perspective adds to the variety of the design.

The front is not like St. Peter's, *evidently* on an equal line, but by the recesses behind the pillars supporting the pediment, (which answer to what the Italians call a *logio*) it acquires a shadow and depth. The projections of the parts on the sides, are more distinct and compact than the same parts in St. Peter's. The situation of the stair-cases adjoining the body of the church, is at the same time commodious, adds to the importance of the center, and breaks the otherwise too sudden lines of the building.

The height of the dome is said to have exceeded what Sir CHRISTOPHER WREN could have wished; but was necessary to satisfy the public. The decorations of the inside were never executed according to the proposed plan. The dome is double; the inside dome being a cone of brick-work, the outside supported by timbers, &c.

PLATE

PLATE XLIX.

PLAN
OF
ST. PAUL'S,
AT LONDON.

PLATE L.

PLAN
OF
ST. PETER'S,
AT ROME.

THESE Plans shew the distribution of these rival buildings. It must be owned the English architect appears to have had most difficulties to struggle with; being confined to narrow limits of breadth, in proportion to length, &c.

The line traced on the Plan of St. Peter's, denotes the length of St. Paul's; and ſhews the proportions of the two churches to each other: St. Peter's being about 725 feet in length; St. Paul's being about 525 feet.

From

From this, and the preceding, series of plates, our readers have formed a general idea, not only of the progress of the science of ARCHITECTURE (which, from an insignificant beginning, has attained both utility and magnificence) but alſo of its leading principles in thoſe parts which are uſually objects of design. It is not to be expected, that every part of this so very extensive and multifarious science should even be mentioned, much less discussed in the contracted space allowed to these Lectures. Many folio volumes have been written on the subject, and every year adds to the number, as well at home as abroad.

It is, perhaps, much to be wished, that representations of the capital productions of Architecture were more easily to be procured: it is true, many may be found scattered throughout the volumes of authors on the subject; but a well-chosen collection is wanting. Such a work ought to exhibit, not only the erections of modern times, but also the remains of the most important antiquities, which thereby might not only become lessons and studies for artists, but also might contribute to a compariſon between ancient and modern art. We aſſume ſome merit, in having attended to this principle: we hope, added to the utility of this collection, it will yield to our readers both pleasure and advantage.

OF

OF PRACTICAL BUILDING.

IN *Building* three things are chiefly to be studied: Convenience, Firmness, and Pleasure. To attain these, we may consider this subject under (1) the *situation*, and (2) the *structure*.

For the SITUATION *of a building*, regard should be had to the quality, temperature, and salubrity of the air; the convenience of water, fuel, carriage, &c. and the beauty of the prospect.

For the distribution of the parts of a building, the observation is, that the chief rooms, studies, libraries, &c. ſhould lie toward the eaſt: offices that require heat, as kitchens, distillatories, brew-houses, &c. toward the south: those that require a fresh cool air, as cellars, pantries, granaries, &c. toward the north, also galleries for paintings, museums, &c. which require a steady light. Nevertheless, the ancient Greeks and Romans generally placed the front of their houses to the south; but the modern Italians vary from this rule.—Indeed, in this matter, regard must be had to the general properties of a country; all places being obliged to provide against their respective inconveniencies; so that a good parlour in Egypt might make a good cellar in England.

The STRUCTURE *of a building*, may be considered as composed of, first, the *principal* parts; then the *necessaries*, or ornaments. To the principals belong, the materials, and the form.

The MATERIALS *of a building* are either stone, marble, brick, or wood, as fir, oak, &c.

The FORM *of a building* is either *simple*, or *mixed*. The simple forms are either *circular*, or *angular*: the mixed are compounded of both.

The circular form is commodious, of great capacity; strong, durable, and beautiful; but the most expensive; loses much room when divided; and has an ill distribution of light, except from the center: the ancients therefore, used the circular form only in temples and amphitheatres, which needed no compartition. Oval forms have the same inconveniencies, without the same conveniencies, being of less capacity.

Sir HENRY WOTTON observes, that *building* loves neither many nor few angles: the triangle, *e. gr.* is condemned, wanting capacity and firmness; also, because incapable of being gracefully resolved into any other regular figure in the partitions, besides its own. Figures of five, six, seven, or more angles, are fitter for fortifications, than for civil *buildings*. Rectangles are preferred, as being a just medium between extremes. Of these an oblong, provided the length does not exceed the breadth by above one third, is usually most esteemed.

Mixed figures, partly circular, partly angular, may be judged by the rules which regulate the simple ones; but they offend against uniformity, though they admit most variety; and however uniformity and variety may seem to be contrary to each other: yet they are both necessary to a happily composed building.

The PARTS *of a building*, have been comprised under five heads, the *foundation*, the *walls*, the *apertures*, the *distribution*, and the *coverings*.

For

For the Foundation, *Vitruvius* orders the ground to be dug up to examine its firmness; and its apparent solidity not to be trusted to, unless the whole mould cut through be found solid. The depth of the digging, *Palladio* limits to a sixth part of the height of the building, for structures of great magnitude and weight.

This Sir *H. Wotton* calls the *natural foundation*; whereon are to stand the walls, which he calls the *artificial foundation:* this then is to be the level; its lowest ledge, or row, being of stone, close laid with mortar, and the broader the better; at least twice as broad as the wall. Some add, that the materials below should be laid just as they grow in the quarry, supposing them to have the greatest strength in their natural position. *De Lorme* enforces this, by observing, that the breaking of a stone in this part of the fabric, though but the breadth of the back of a knife, will make a cleft of above half a foot in the superstructure.

The great laws of walling are, that all walls stand perpendicular to the ground-work; the right angle being the cause of stability: that the massiest and heaviest materials be lowest, as fitter to bear than to be borne: that the work diminish in thickness as it rises: that certain courses of superior strength be occasionally inserted to sustain the fabric, if the under parts chance to decay: and lastly, that the angles be firmly bound, and united; these being the nerves of the whole, and commonly fortified, by the *Italians*, at the corners, *(coins*, or *quoins)* even in brick *buildings*, with squared stones; which add both beauty and strength.

The APERTURES, are either doors, windows, staircases, chimnies, drains, &c. with regard to the last, Art should imitate Nature in these ignoble conveyances, and seclude them from sight, with the utmost possible address.

In Distribution there are two general views, *gracefulness* and *usefulness:* gracefulness consists in a double analogy or correspondence; first, between the parts and the whole; a large fabric should have large partitions, entrances, doors, columns, and, in general, all the members large. The second analogy is between the parts themselves, with regard to length, breadth, and height. The ancients determined the length of their rooms, that were oblongs, by double their breadth; their height by half their breadth and length, added together. When the room was square, they made the height half as much more as the breadth; these rules the moderns dispense with; sometimes squaring the breadth, and making the diagonal thereof the measure of the height; and sometimes more: according to circumstances, which require adaptation and management.

USEFULNESS, consists in having a sufficient number of rooms of each kind, with proper communications, and without interference. The chief difficulty lies in the lights and stair-cases. The ancients were pretty easy on these heads, having generally two cloistered open courts, one for the women's side, the other for the men's: thus the reception of light into the body of the *building* was easy; which, among us, must be supplied either by

by the open form of the building, or by graceful refuges or breaks, by sky-lights, &c. As to placing the offices, they should be neither so near as to be offensive, or intrusive on the company, nor so distant as that too much time should be consumed in passing to, or from them.

In distribution, an Architect will have occasion for frequent shifts; through which his own sagacity, more than any rules, must conduct him. For instance, he will be frequently put to struggle with scarcity of ground; sometimes to ruin the appearance of one room for the benefit of others; in general, his aim should be to make those the most beautiful which are most in sight; and to leave the rest, as it were, in shadow, &c.

In the covering, or roof, two extremes are to be avoided, the making it too heavy, or too light: the first will press too much on the supports; the latter has no less inconvenience; for the cover is not only a defence, but, a band or ligature to the whole *building;* and requires a reasonable weight. Care should be taken, that the pressure be equal on each side; nor should the whole burden be laid on the outward walls, but the inner walls should likewise bear their share. The *Italians* are curious in the proportion of the slope of the roof; dividing the whole breadth into nine parts, whereof two serve for the height of the highest ridge to the lowest: but in this, regard must be had to the climate, for those climates which fear the falling of snow, rain, &c. ought to have sharper roofs than others, that the snow which can lodge upon them, may be less in quantity and weight.

The

The *acceſſories*, or *ornaments* of *buildings*, are derived from painting and ſculpture. The chief rules to be regarded in embellishment with pictures are, that no room have too much, (this does not include galleries, or the like:) that the best pieces be placed in the most advantageous lights: rooms with ſeveral windows, are enemies to pictures, nor can any picture be ſeen in perfection, unleſs illumined like Nature, with a single light. Also, in their disposition, regard must be had to what side the light comes from, to their height from the eye, which is the most natural for the ſpectator; and their subjects must be accommodated to the intention of the room they are uſed in. Ornaments of sculpture, must not be too abundant; especially at the approach of a *building*, or at the entrance; where *Doric* ornaments are preferable to *Corinthian*; fine sculptures, should always have the advantage of nearness to the eye, and coarser performances of distance from it.

To judge of a *building*, Sir *H. Wotton* lays down the following rules.—That, before giving any judgement, a perſon be informed of its age; since, if apparent decays exceed the due proportion of time, it may be concluded, that the situation, the materials, or the workmanship, is bad. If it be found to bear its years well, let him advert, from the ornaments and things which strike the eye first, to the more essential members; having determined on theſe, he may pronounce whether, or not, the work be commodious, firm, and delightful; the three conditions in a good *building*, first laid down and agreed on by all Authors.

In

In this judgement should be included the consideration, whether the walls stand upright, upon a clean footing and foundation; whether the *building* be of a beautiful stature; whether the principal entrance and others be well placed; as alſo the windows, offices, &c.

Vitruvius gives another method of judging: summing up the whole art under these six heads: *Ordination*, or settling the model and scale of the work; *Disposition*, the just expression of the design thereof; *Eurythmy*, the harmony between the length, breadth, and height of the several rooms, &c. *Symmetry*, or the agreement between the parts and the whole; *Decor*, the due relation between the *building* and the inhabitant: and *Distribution*, the useful allotment of the several rooms for office, entertainment, or pleasure. These last four are ever to be ſtrictly attended to: and these are sufficient to condemn or acquit any *building* whatever.

Dr. *Fuller* gives us two or three good aphorisms in *building*; as,—1. Let not the common rooms be private, nor the private rooms be common.—2. A house had better be too little for a day, than too big for a year.—3. Country houses must be substantives, able to stand of themselves: not like city *buildings*, supported and sheltered on each side by their neighbours.—4. Let not the front look aſquint on a stranger: but accost him right at his entrance.—5. Let the offices keep their due distance from the Mansion-house; those are too familiar, which are of the same pile with it.

The

The design of an edifice is commonly laid down on three several draughts.

First, a *Plan*, which exhibits the extent, divisions, and distribution of the ground, into the various apartments, and other conveniencies. Plans are often made for the several stories: as their distribution may differ occasionally.

A second drawing represents externally the stories, their heights, and the general appearance of the whole building: this is termed an *Elevation*.

The third drawing is the *Section*, and shews the internal parts of the fabric; the front wall being supposed absent.

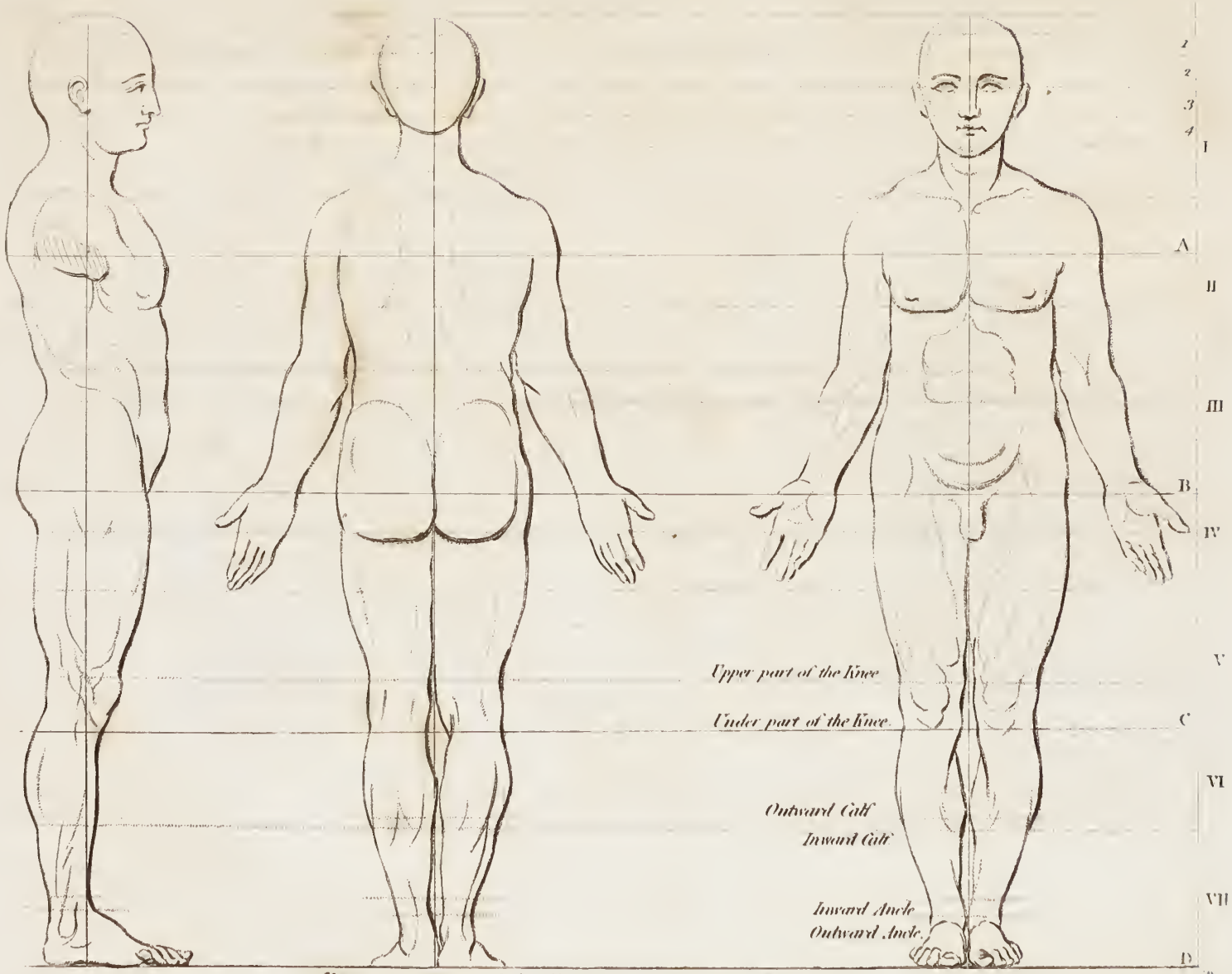
By means of the Plan, the Elevation and the Section, an estimate may be made of the expence, time, &c. a building may require, according to its measurement. And the most accurate estimates are necessary in this art, because some things always occur that could not be foreseen; but for which in good estimates allowance is regularly made.

END OF THE LECTURES ON

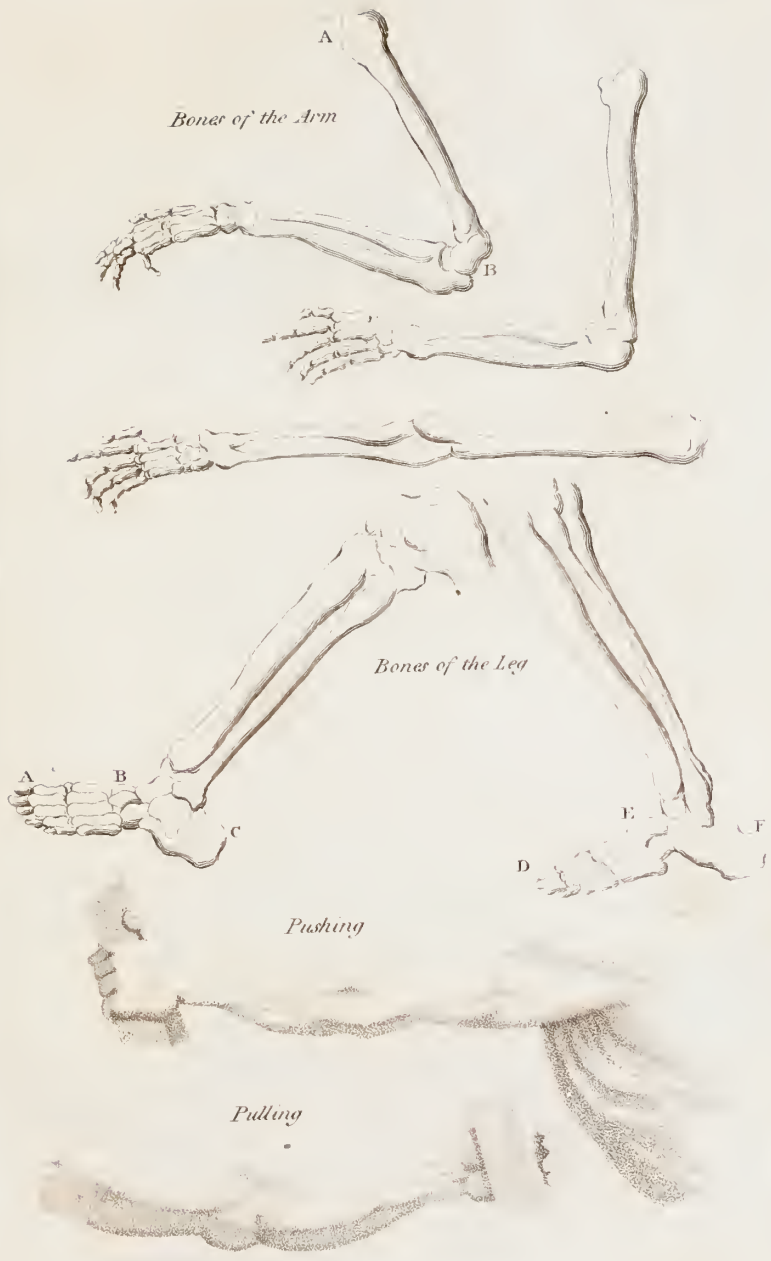
ARCHITECTURE.

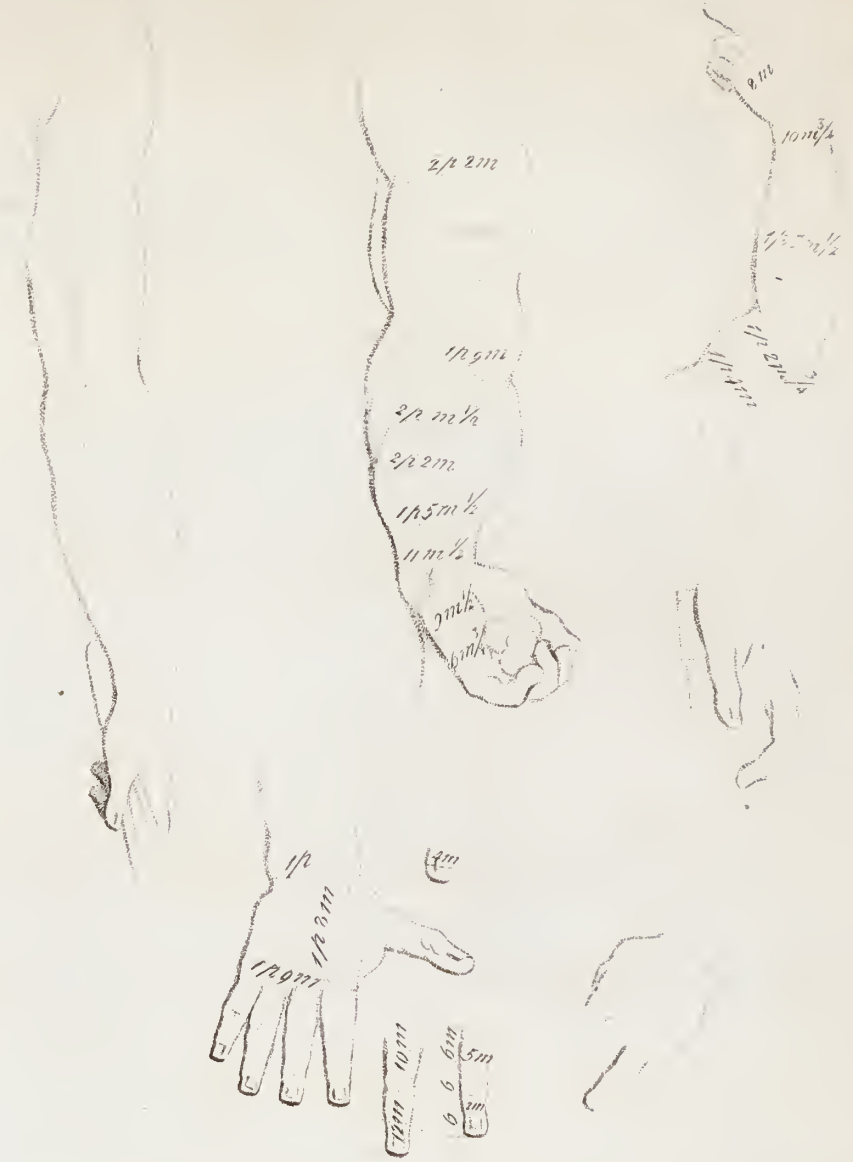
Frontispiece to VOL. IV.

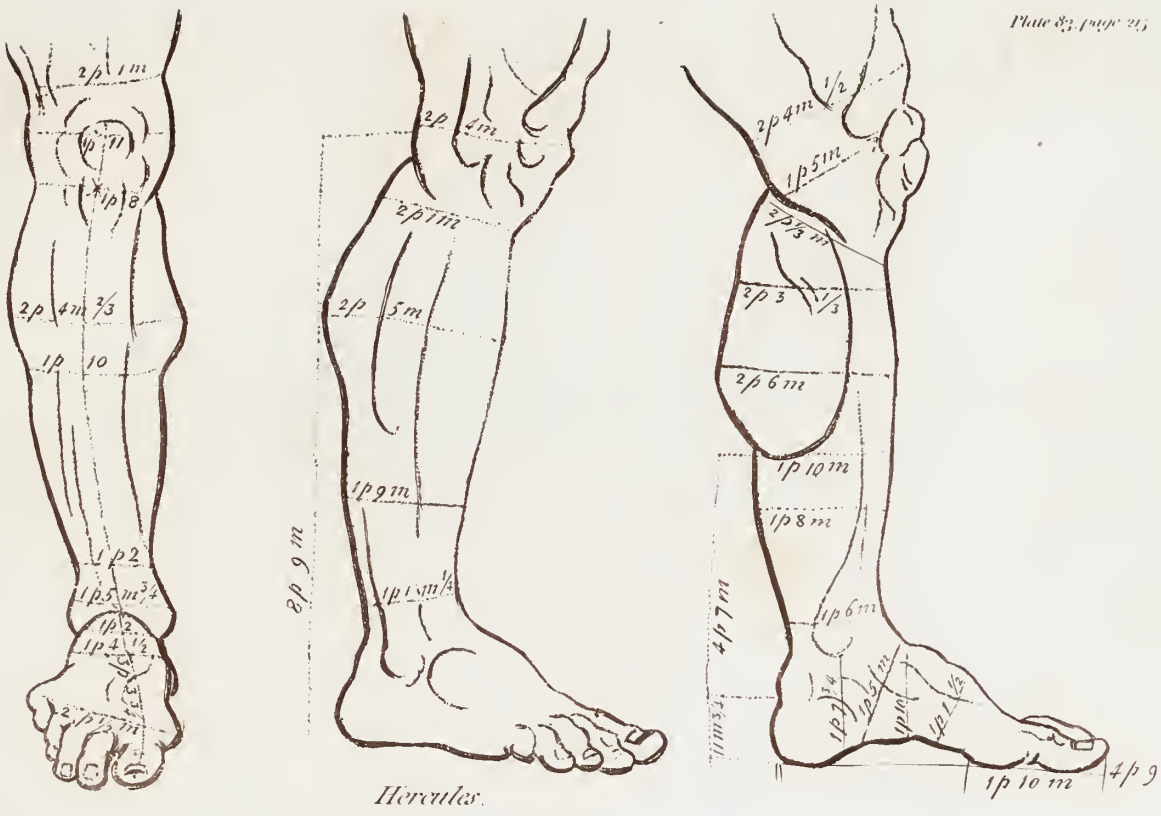
Britannia rewarding the Arts.

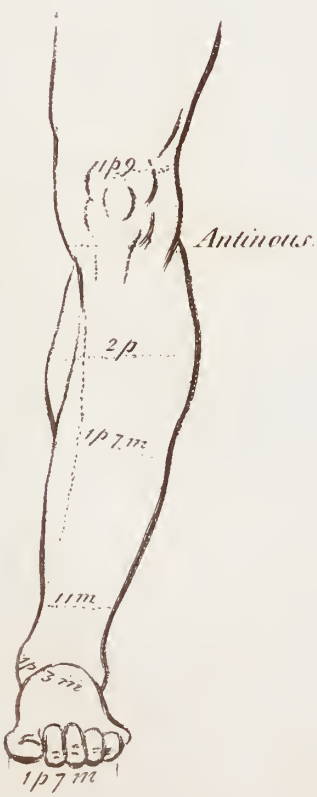


PROPORTIONS of the FIGURE: *from actual Measurment.*


A
Bones of the Arm
B
Bones of the Leg
A
B
C
E
F
D
Pushing
Pulling


2/p 2m
1/p 9m
2/p m½
2/p 2m
1/p 5m ½
11 m ½
1/p
1/p 9m
1/2 9m
6 6m
5m





CHARACTER.

Measured from the Antique.

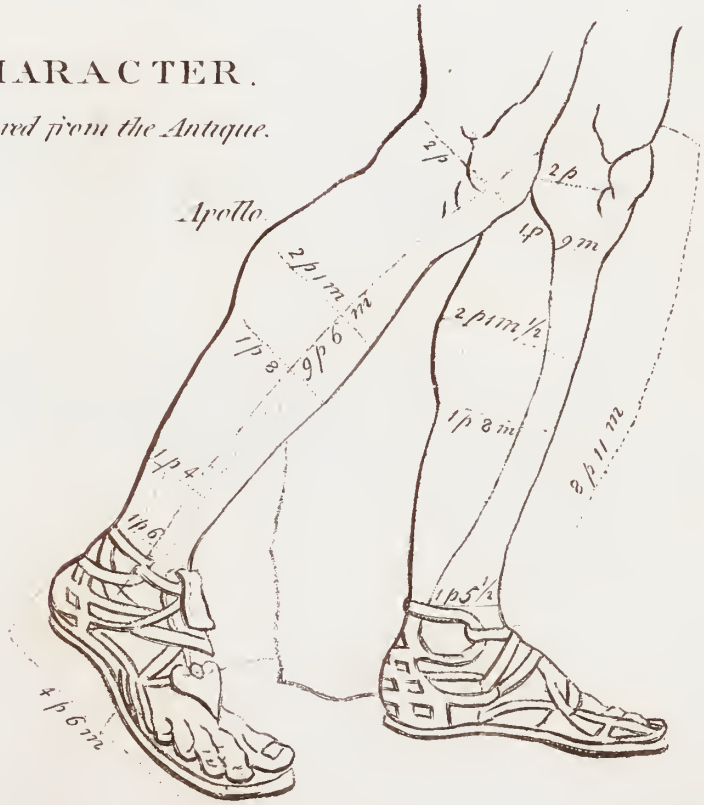
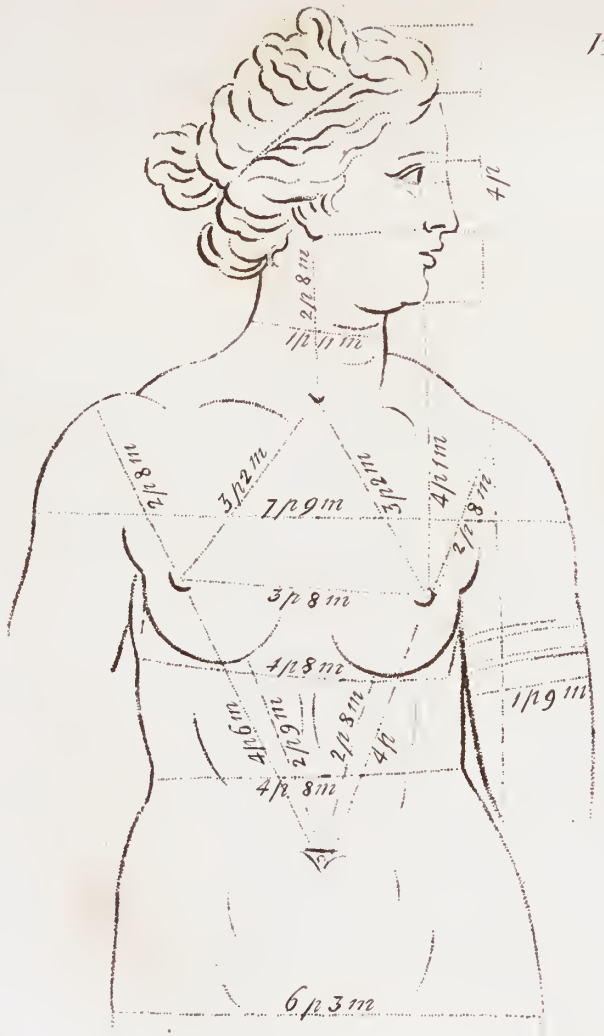


Plate 86 pa 215

Plate 87 pa. 215.

VENUS measured from the Antique.



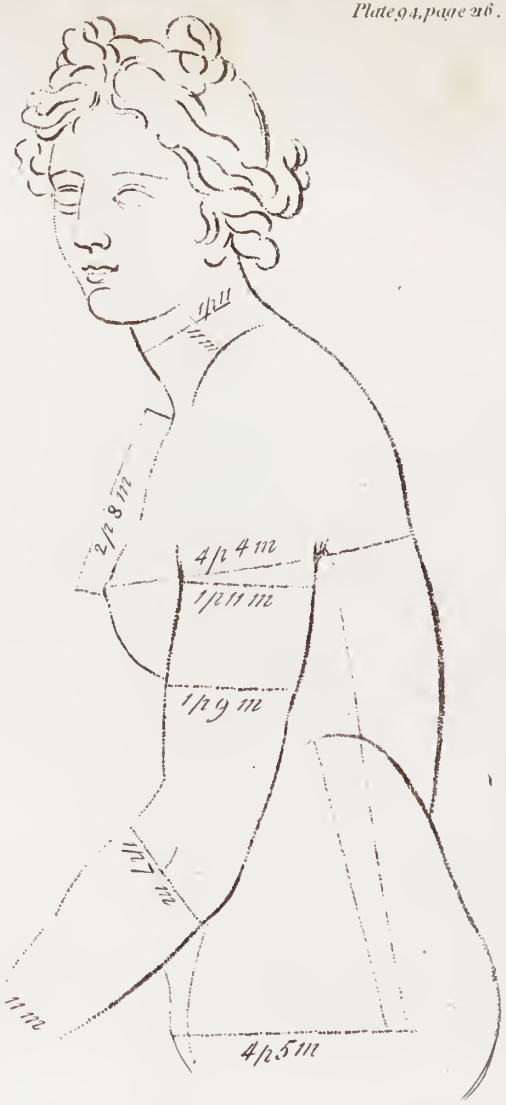
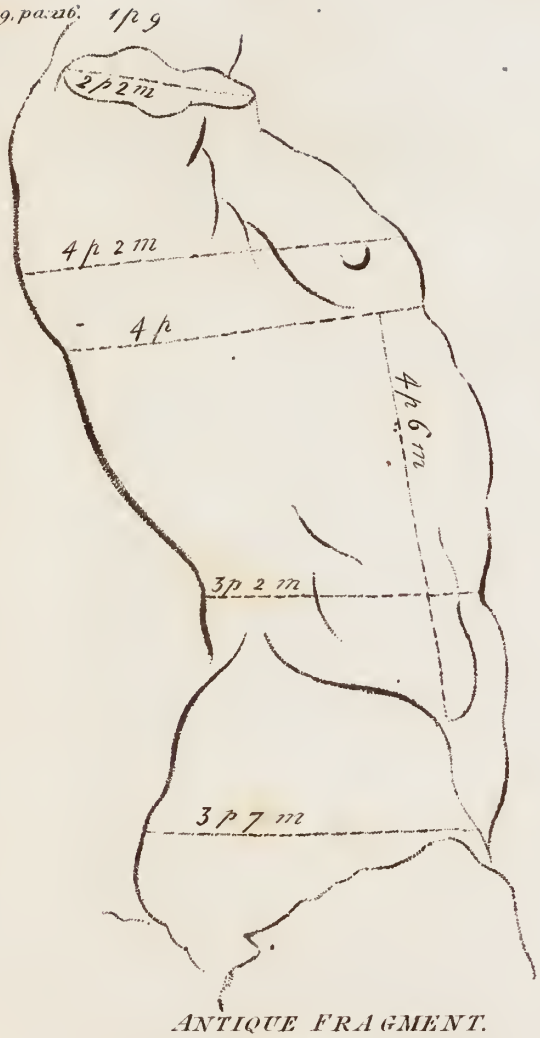


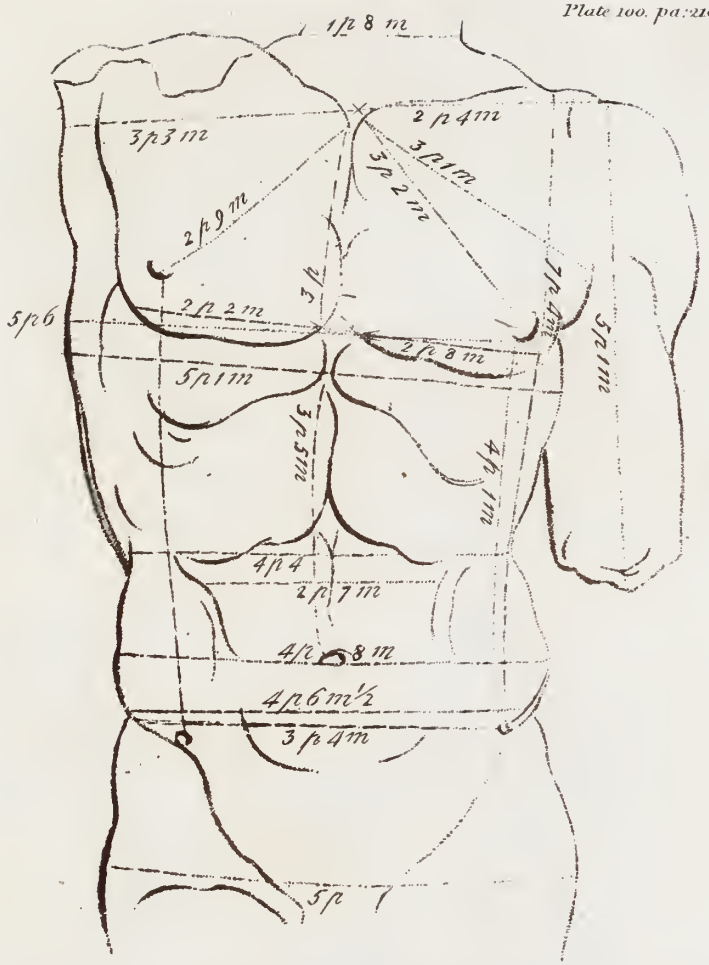
Plate 99. pa. 216.



ANTIQUE FRAGMENT.

Supposed by the Author of Antinous

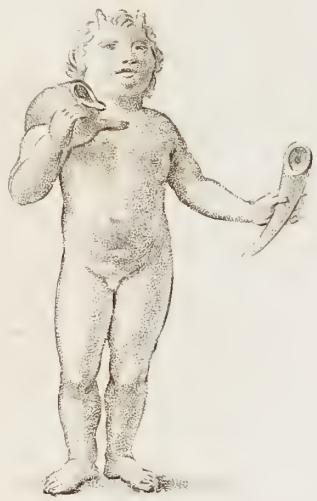
Plate 100. pa: 216



ANTIQUE FRAGMENT.

Supposed by the Author of Antinous.

Plate 103. page 41.



Antinous

Hercules

Plate 105 pa243.

Bacchus

Silenus

Apollo

Mars

Plate 100 pa 244.

Venus

Diana

Water Nymph

Flora

Plate 107, page 245.

Faun.

River Nile

Plate 108, page 246.

Pan.

Centaur.

Plate 109 pa 247

From the Antique

From a Drawing by Richard Cosway R.A.

Plate 12, Page 247.

CHARACTER,

Plate 113. Page 247.

CHARACTER.

Plate 125, page 271

Surprise.

Fear.

Affright.

Terror.

Resignation.

Reverence.

Despondency.

Grief.

Plate 127, page 272.

Authority. *Anger.*

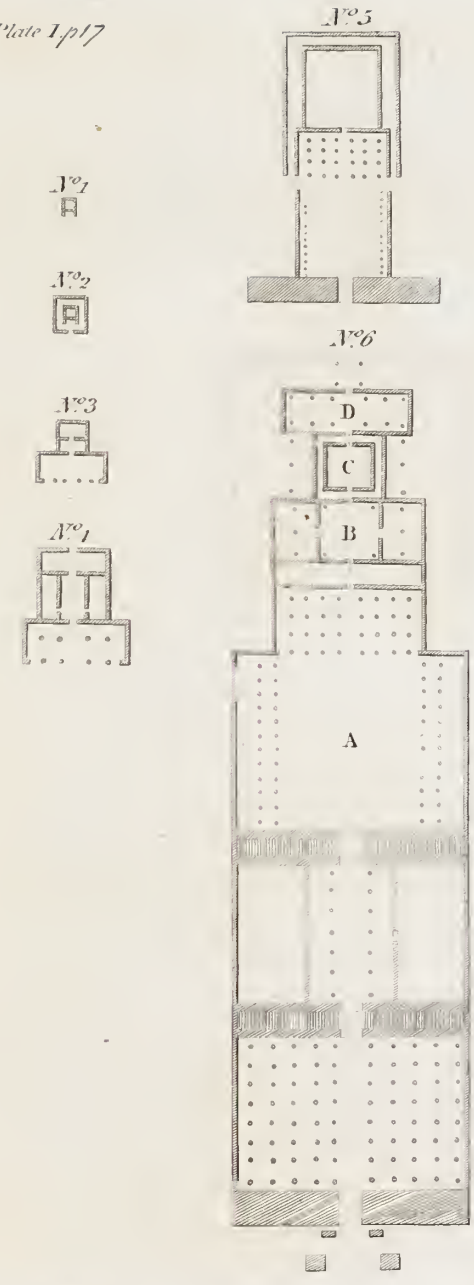
Intercession. *Cruelty.*

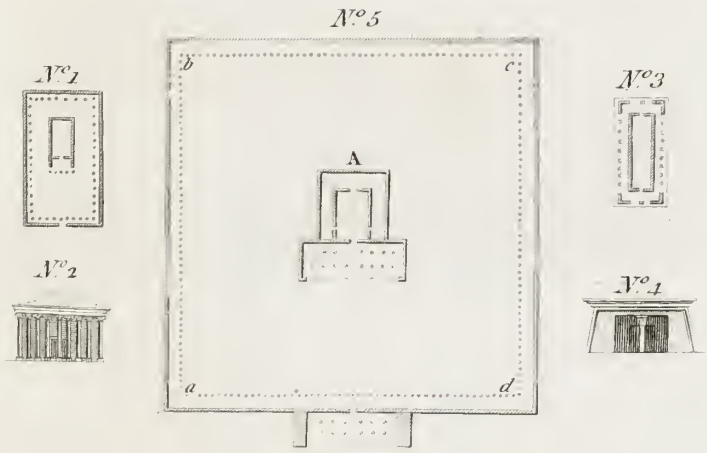
Suspence.

Exultation.

Aversion.

Architecture. Plate 1 p17

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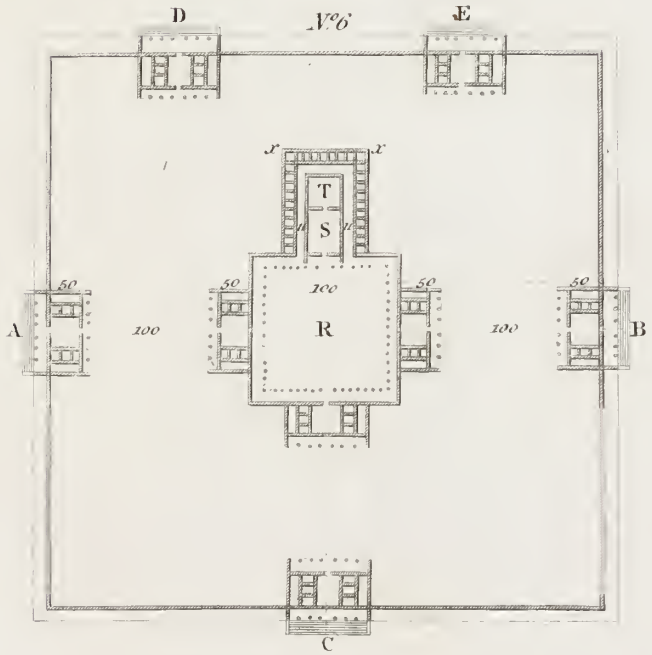
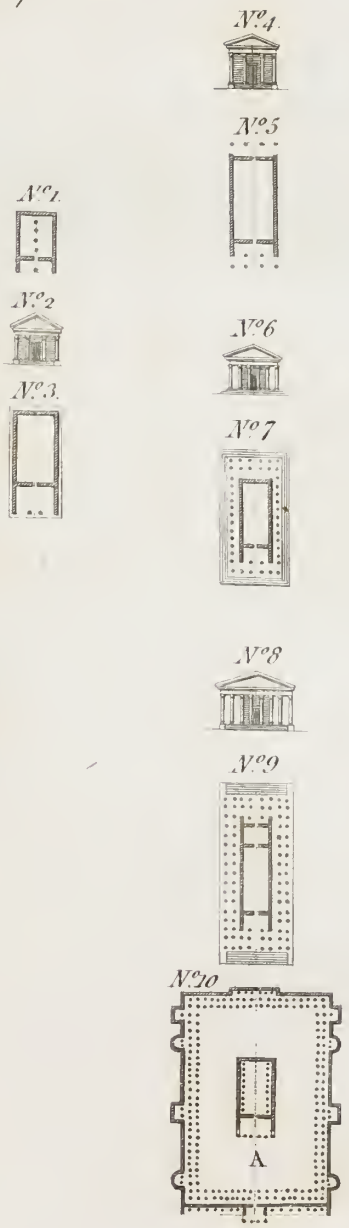
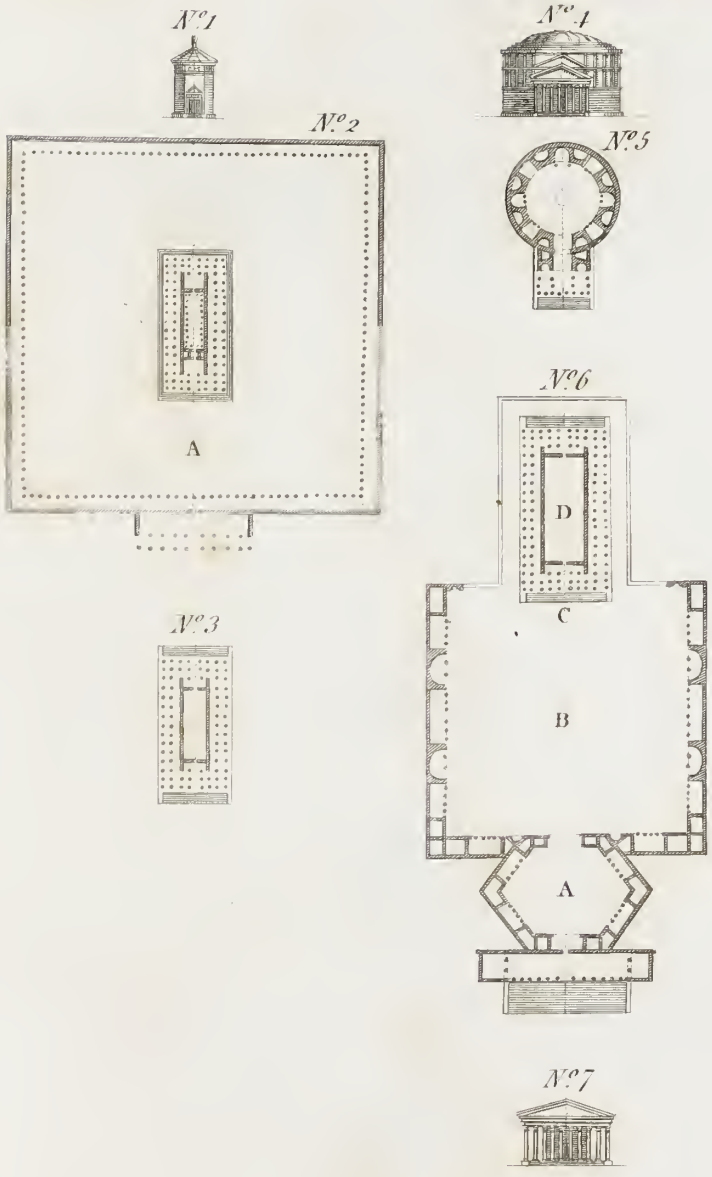
No 1
No 3
No 2
No 4
A
b
c
a
d


D
No 6
E
x
x
T
S
R
A
B
C
50
50
100
50
50
100
100

Architecture Plate III p 20

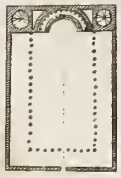



No 1
No 4
No 2
No 5
A
No 6
D
C
No 3
B
A
No 7

Architecture Plate V. p 22.

N.º 1

N.º 2



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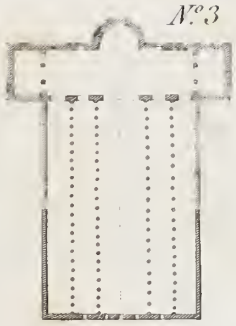

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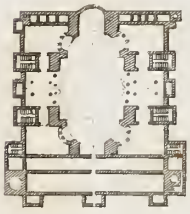
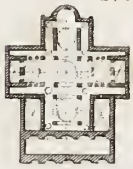


N.º 5

N.º 6



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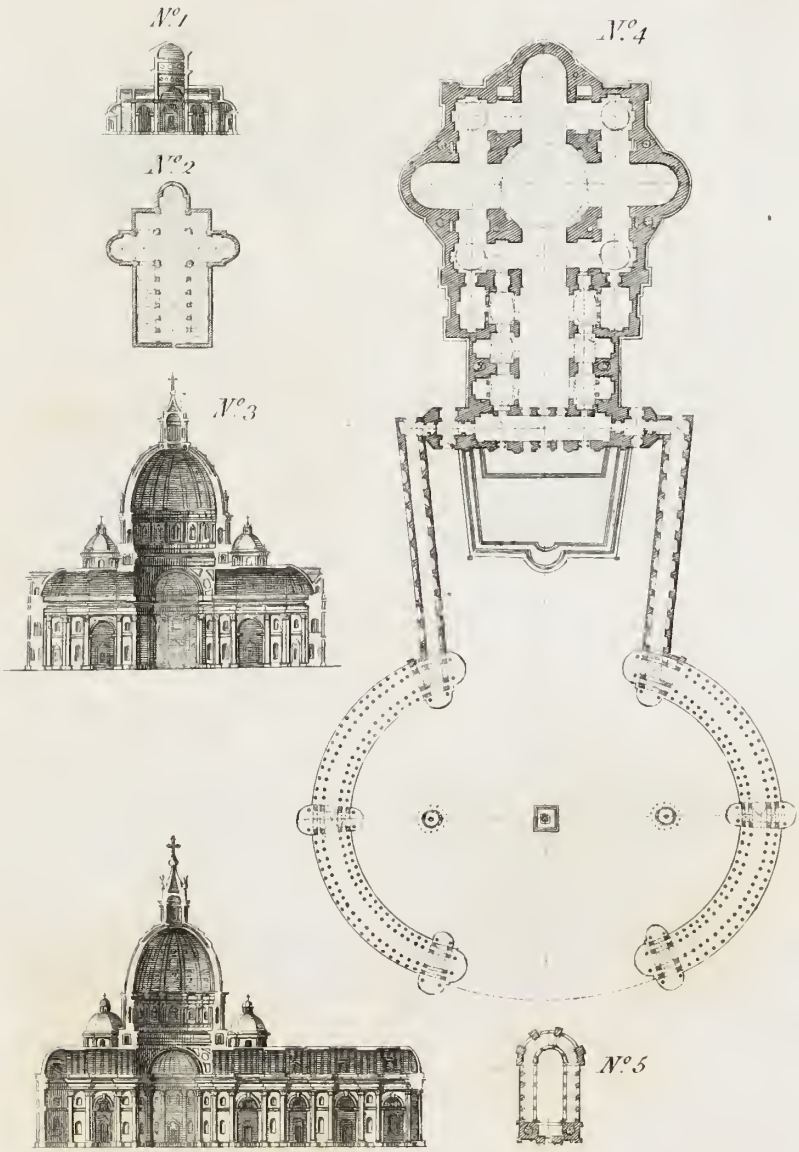
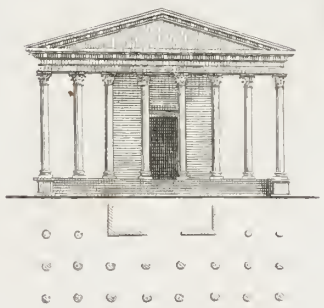

No 1
No 2
No 3
No 4
No 5

No 1.

No 2

No 3.

No 4



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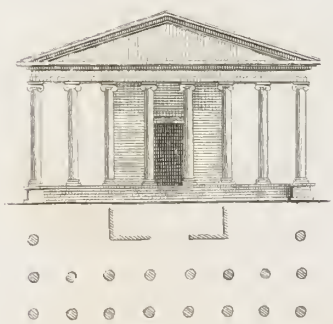

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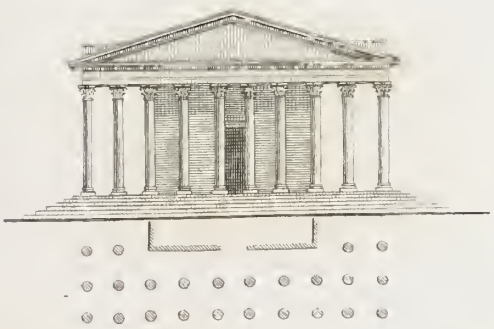
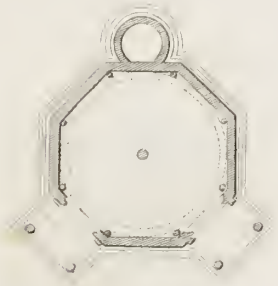


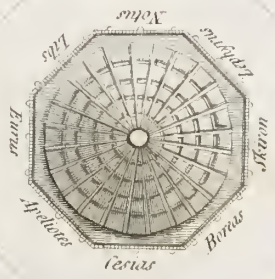
Elevation

Section

Tower of the Winds
at Athens.



Plan of the Building



Plan of the Roof

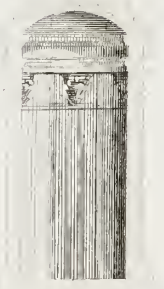
Architecture Plate IX. p 26.

Monument to the honour of Lysicrates at Athens.

N.o 1

Elevation

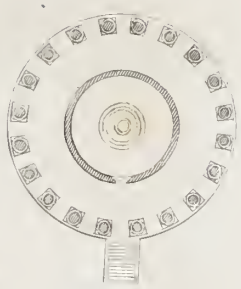
N.o 2

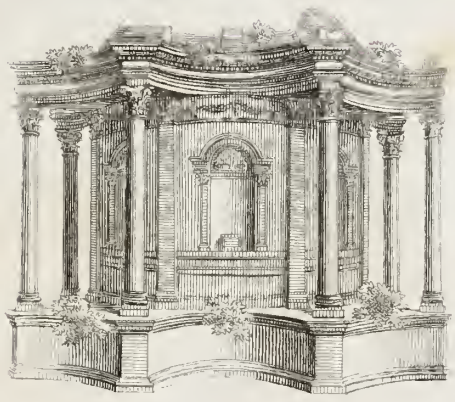


Section

No 1.

No 2.



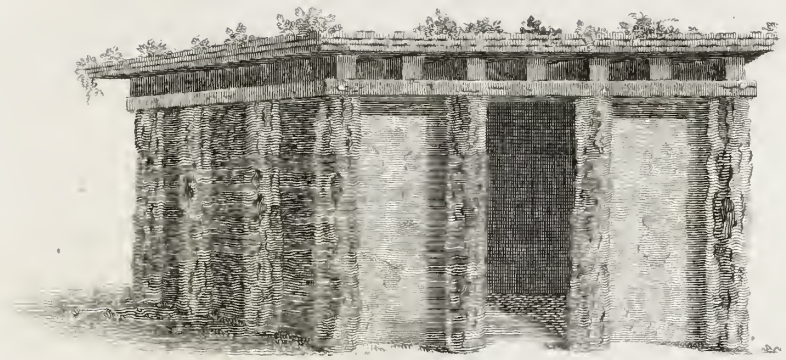


A Circular Temple at Baalbec.

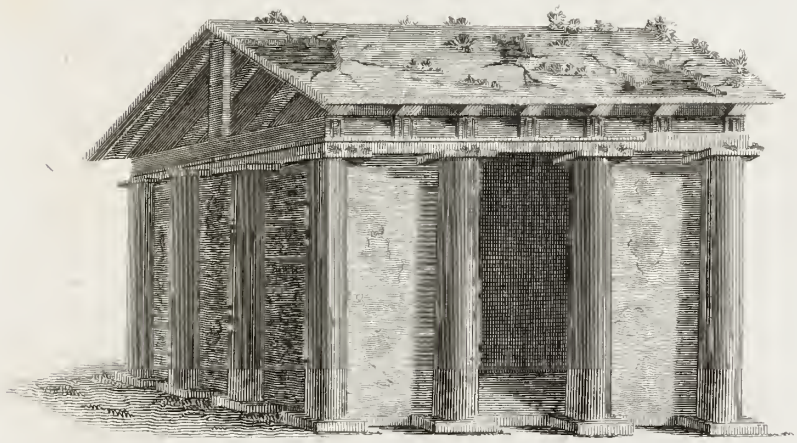
Architecture Plate II. p 56.

Construction of HUTS.

N.o 1



N.o 2.



Progreſs of the DORIC ORDER.

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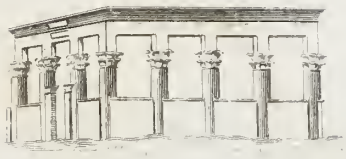
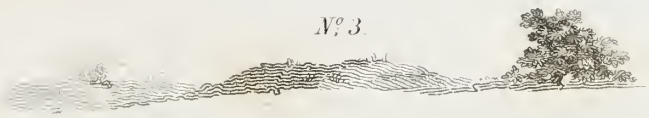
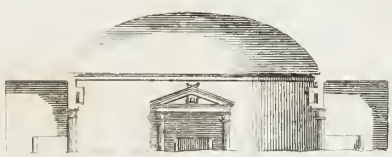


N°. 2.

N°. 3.





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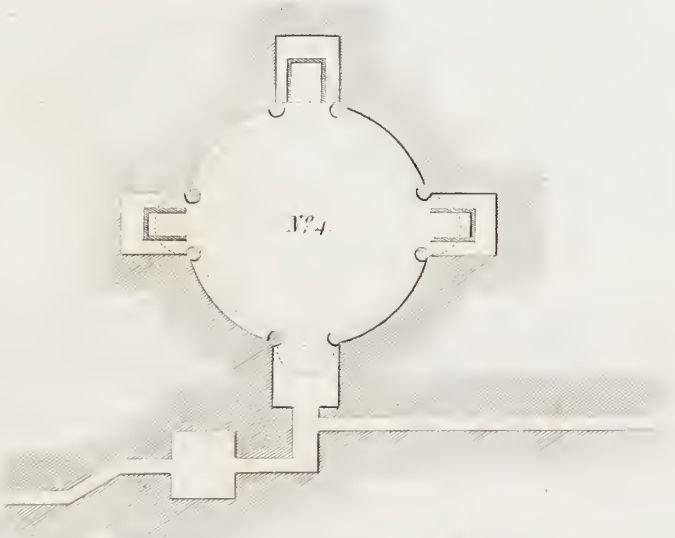

EGYPTIAN TEMPLES.

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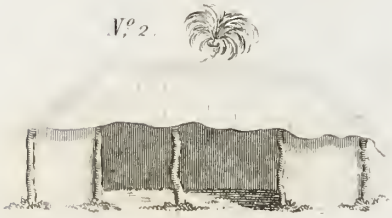
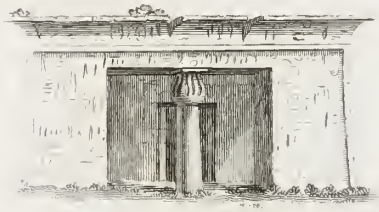


N°. 2.

N°. 3.



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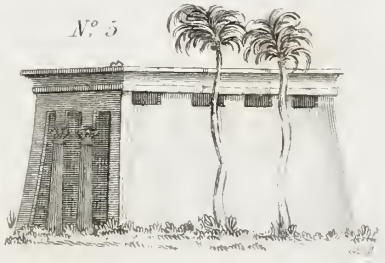

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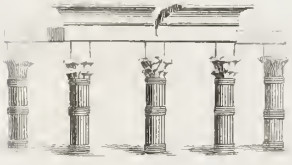

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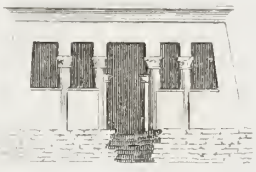

N°. 7.

Progress of EGYPTIAN TEMPLES.

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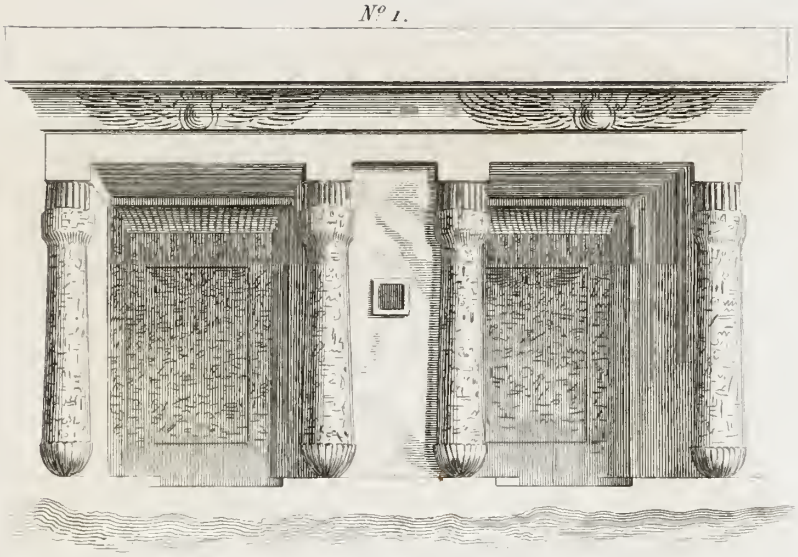

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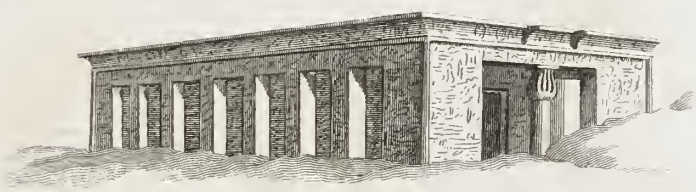

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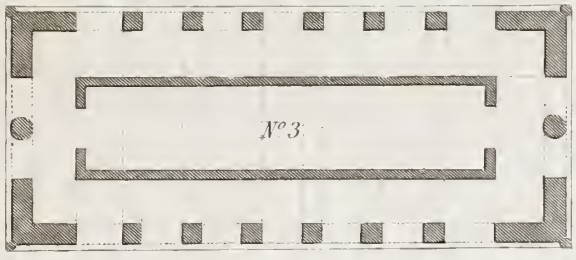
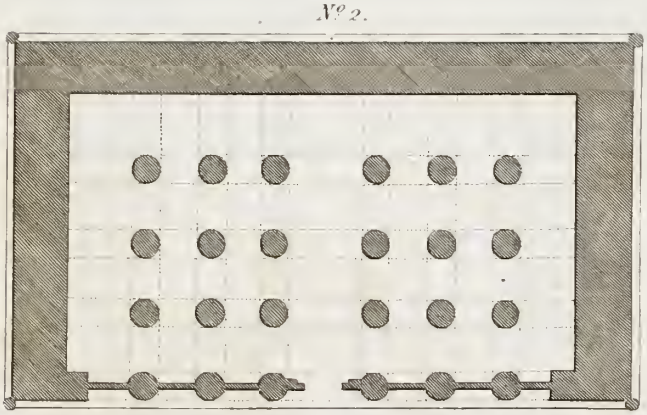


EGYPTIAN TEMPLES.

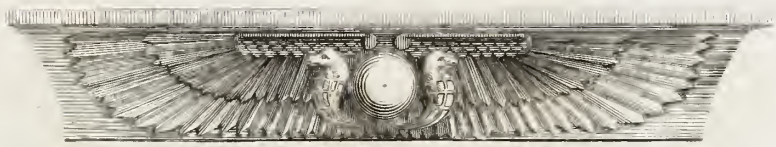
N° 1.

N° 2.



EGYPTIAN TEMPLES.

N°. 1.



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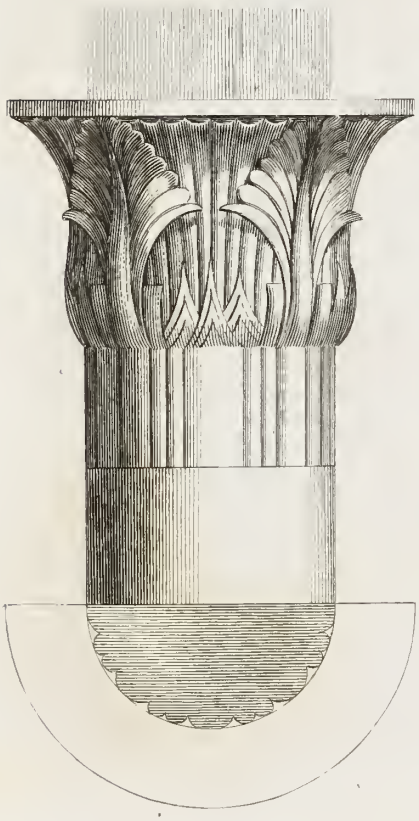
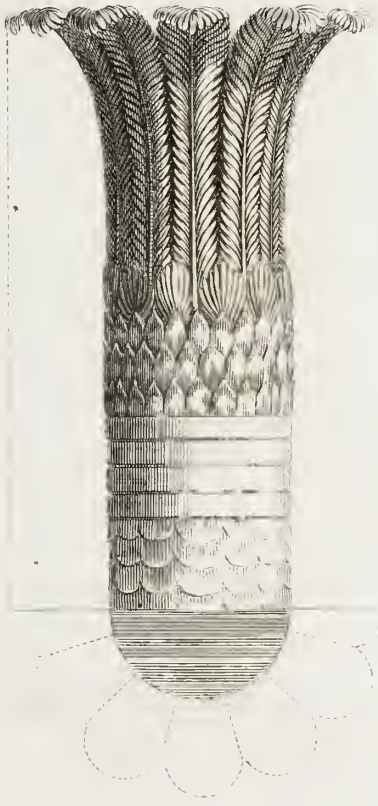


N°. 3.



Suggested PARTS of Columns.

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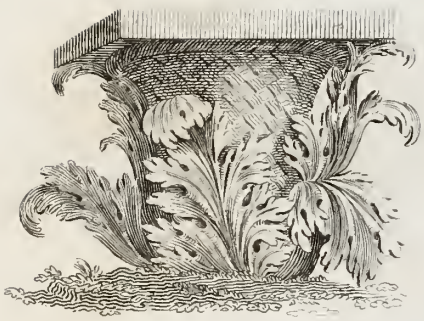

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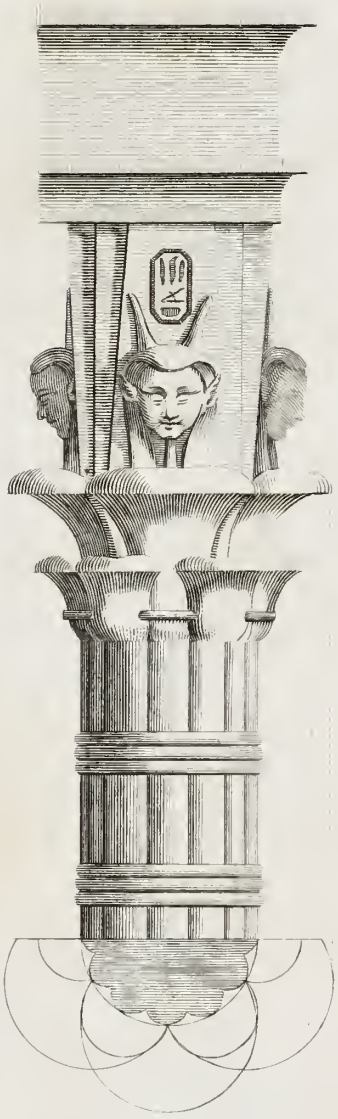

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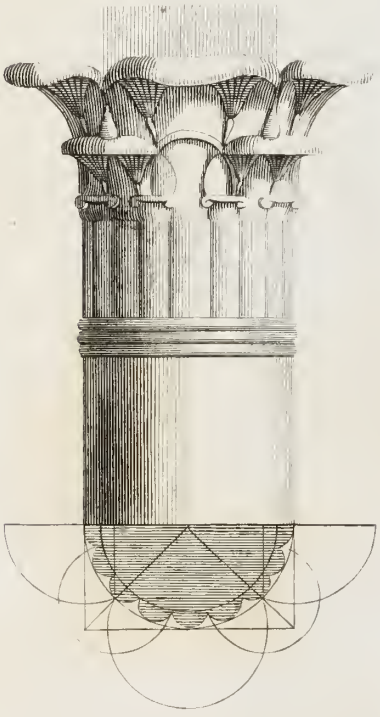
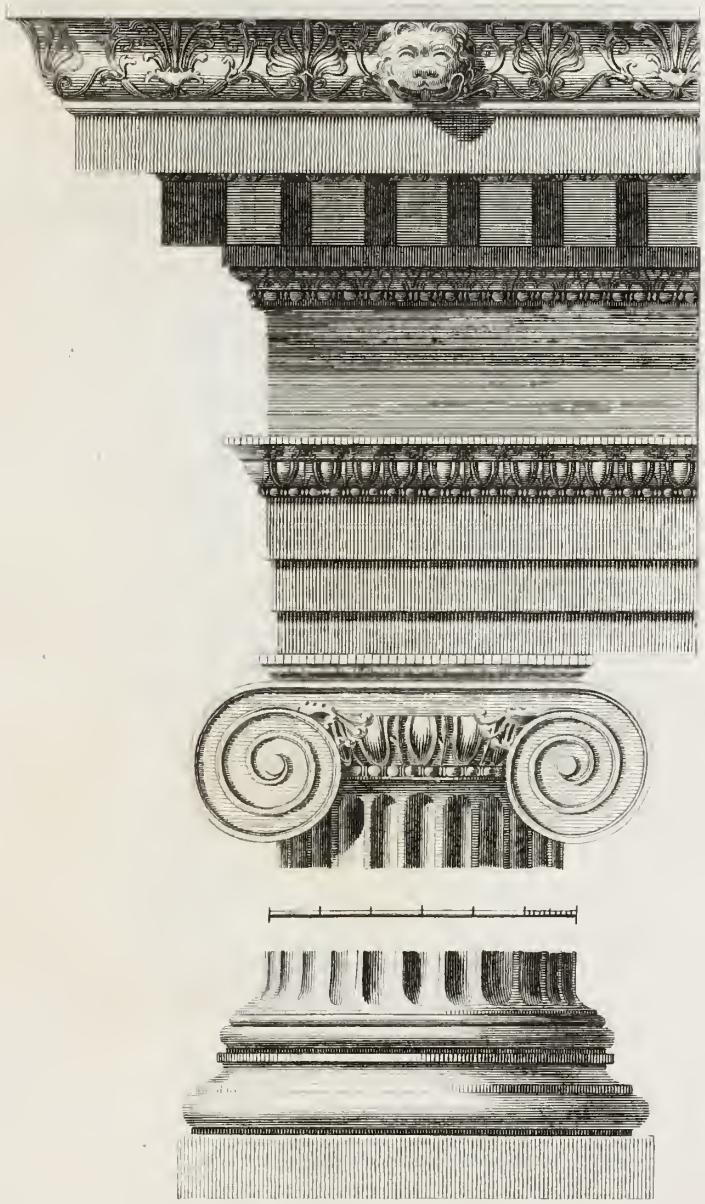


Suggested PARTS of Columns.



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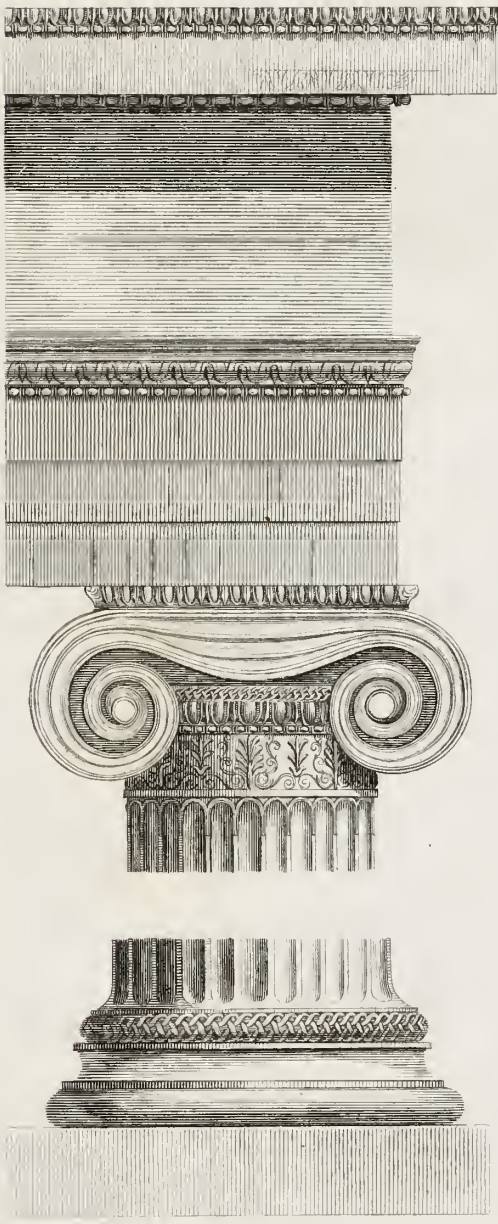


IONIC ORDER.

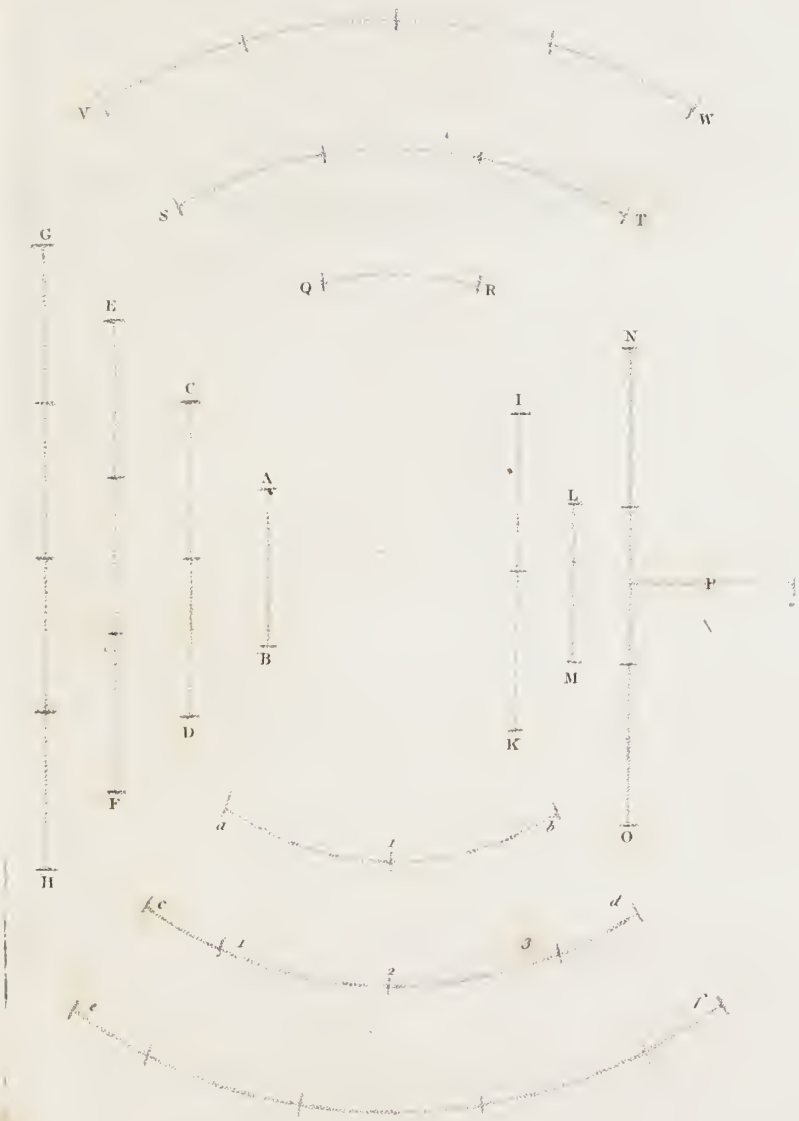
Plate 1 pa. 90

PRINCIPLES of PROPORTION.

Plate 2 pag. 91

PRINCIPLES of PROPORTION.

Plate 3, pa 92.



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